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Political Connections, Internal Conflicts of Interest, Earnings Management, and Investment Inefficiency: Additional Evidence from Indonesia

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STATEMENT OF AUTHORSHIP

I hereby declare that this thesis contains no material which has been submitted for the award of any degree or diploma in any university or equivalent institution, or any material previously published or written by another person(s), except where due reference to that material is made.

Signed  **……**

Sandy Harianto

Date …20-08-2020 ...……...

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ABSTRACT

The main purpose of this study is to provide further insights into the relationship between political connections, firms' internal conflicts of interests, earnings management, and investment inefficiency in the Indonesian capital market. While most studies focus on the opportunistic behaviour of politically connected firms, this study explore the possibility of accountable behaviour of politically connected firms. Using an original dataset for a sample of Indonesian listed firms, the findings of the empirical analysis provides empirical evidence to show that the behaviour of politicians in politically connected firms is influenced by internal and external factors.

The main contribution of the thesis is providing novel evidence that shows that politicians in politically connected firms can act responsibly when necessary. As a result, politically connected firms are associated with the reduction of principal-principal and principal-agent conflicts, lower level of real and discretionary accruals earnings management activities and lower level of investment inefficiency, either in the form of over-investment, under-investment or overall level of investment inefficiency. Moreover, this study also provides novel evidence to support the complementary relationship between political connections and corporate governance quality, contrasting previous studies results on the substitutionary relationship between the two factors.

The results of this study could change how academicians and practitioners view the impact of political connections. Academicians have a new angle and avenue of research on the role of politicians in a politically connected firm, while the results should also strengthen the demand for improvement of corporate governance quality and transparency for investors and regulators around the world.

CHAPTER 1

INTRODUCTION

1 Introduction

1.1. Introduction

The purpose of this thesis is twofold. First, it aims to provide evidence into the potential accountable behaviour of politicians and its impact on conflicts of interest within firms (i.e., principal-principal and agent-principal conflicts), earnings management activities (i.e., real and accruals-based earnings management) and investment inefficiency (i.e., overall investment inefficiency, over-investment and under-investment). Second, it aims to investigate the relationships between political connectedness and corporate governance quality.

The political connection is a global phenomenon.[1] In many countries, having political connections is crucial for firms because political connectedness enables firms to obtain easier access to lending, especially from state-owned banks (Khwaja and Mian, 2005; Charumilind et al., 2006; Leuz and Oberholzer-Gee, 2006; Bliss and Gul, 2012b; Bliss and Gul, 2012a; Boubakri et al., 2012a), preference status to obtain significant and important government contracts (Dieleman and Sachs, 2008; Goldman et al., 2013), access to precious resources such as lands, capital, and licenses (Ling et al., 2016), and favourable policies that reduce market competition (Hou et al., 2017).

There are two contrasting behavioural views regarding the value of political connections. On the one hand, the opportunistic behaviour view considers managers and politicians as opportunistic rent-seekers who place their own benefits above those of outsiders (Krueger, 1974). According to this view, since all the parties inside politically connected firms are utility maximisers, the costs of having political connections may outweigh the benefits gained from having political connections.

On the other hand, the accountable behaviour view considers managers and politicians as stewards who safeguard the firm's long-term interests (Davis et al., 1997). According to this view, since all the parties inside politically connected firms are good stewards, the benefits of having political connections will outweigh the costs of having political connections.

Besides the behavioural views, several cross-country studies also suggest that countries' institutional settings play an important role in the existence and value of

[1] Firms with political connections exist in Asia (Fisman, 2001; Johnson and Mitton, 2003; Leuz and Oberholzer-Gee, 2006; Bunkanwanicha and Wiwattanakantang, 2009; Bliss and Gul, 2012a; Bliss and Gul, 2012b; Polsiri and Jiraporn, 2012; Wu et al., 2012a; Schoenherr, 2019), America (Goldman et al., 2009; Goldman et al., 2013; Acemoglu et al., 2016; Pham, 2019), Europe (Niessen and Ruenzi, 2010; Amore and Bennedsen, 2013; González-Bailon et al., 2013; Bona-Sanchez et al., 2014; Bona-Sánchez et al., 2019), the Middle East (Al-Hadi et al., 2016), Africa (Attia et al., 2016; Rijkers et al., 2017; Maaloul et al., 2018) and Australia (Gray, Harman, & Nowland, 2016).

politically connected firms. The existence of politically connected firms is more common in countries with two extremely different settings: less-developed countries with a high level of corruption and countries with a high level of transparency (Faccio, 2006; Boubakri et al., 2012b). Based on these findings, we expect more studies that would support both opportunistic and accountable views on political connections, both in developed and developing countries with varying degrees of corruption and transparency.

However, the evidence from the literature on political connectedness overwhelmingly supports the opportunistic view. Owners of politically connected firms can use the easy access to lending for unnecessary business expansions and engaging in unprofitable investment projects (Bliss and Gul, 2012b; Ling et al., 2016) or using the connections to protect major shareholders' expropriating activities, such as using related party transactions for tunnelling (Jiang et al., 2010).

The protection from competitors, access to government contracts and beneficial government policy obtained via political connections can make the management of the firm complacent, making the firms operate less efficiently compare to non-connected firms (Boycko et al., 1996; Leuz and Oberholzer-Gee, 2006). Managers of politically connected firms also have more incentives and more capability to engage in earnings management activities and increase their own wealth because although politically connected firms have a lower level of transparency and earnings quality, they still enjoy a lower cost of debt (Chaney et al., 2011) and lower cost of equity (Boubakri et al., 2012b).

Politicians use connected firms as a means to increase their personal wealth and popularity. Politicians can use the connected firm as a source of funds to finance their political costs, such as campaign and election expenses (Pham, 2019). Connected firms can also be used as intermediaries in allocating government contracts to private firms that are owned by people with close connections to the politicians (Schoenherr, 2019). Moreover, politicians can also use connected firms as a tool to fulfil campaign promises and increase their popularity by ordering connected firms to build factories in the politician's constituency area and hire at excessive levels of employment (Saeed et al., 2017; Bertrand et al., 2018) or have the connected firms engage in unprofitable investment projects that serve the politicians' agenda and fulfil their campaign promises (Chen et al., 2011c).

There are limited studies in the literature with results that support the accountable behaviour view. Niessen and Ruenzi (2010) show that in a democratic country with a low level of corruption and a strong legal system, political connections become a tool for politicians to improve the relationship between firms and the politician's constituents by

relaying the needs of the constituents directly to the firms without compromising the firms' operational efficiency. Other studies include the work from Bona-Sanchez et al. (2014), which indicates that large controlling shareholders can act as a steward in the presence of a high level of transparency and appoint politically connected board members to improve the firm's reputation and report earnings in good faith.

One possible explanation for the lack of research might be the difficulties of finding a country with an appropriate setting. While Faccio (2006) suggests that political connections are more common in less-developed countries with a high level of corruption and in countries with a high level of transparency, even results from developed countries such as the USA (Goldman et al., 2013; Pham, 2019), France (Bertrand et al., 2018) and Denmark (Amore and Bennedsen, 2013) overwhelmingly support the opportunistic behavioural view. As a result, political connectedness becomes synonym with the opportunistic behavioural view and few studies investigate the possibility of relating political connectedness with the accountable behavioural view.

Although much emphasis has been placed on understanding the opportunistic behaviour of politicians, almost no attention has been devoted to the accountable behaviour view, the benefits that may be generated when politicians act as stewards of the firms, the governance role of politicians within the firm, and how they may act in different settings. Thus, this empirical evidence remains mostly unexplored.

Several important questions are still left unaddressed by prior studies. First, is it possible for political connectedness to reduce the conflict between controlling and minority shareholders in a country with the presence of large controlling shareholders and a weak investor protection system when corporate governance quality has been improved? Second, what is the role of political connectedness in the conflict between managers and shareholders in this setting? Third, do managers in a country with the presence of large controlling shareholders and a weak investor protection system really switch between discretionary accruals and real earnings management activities, or are they using both types concurrently and strategically? Fourth, is it possible that when politicians in politically connected firms act responsibly, this can alleviate the under-investment inefficiency problem without aggravating the over-investment inefficiency problem?

1.2. Research objectives

The first objective of this study is to provide a detailed investigation into the relationship between political connections and firms' internal conflicts of interest (principal-principal and agent-principal conflicts) in an emerging country with unique

and contradicting institutional settings, such as Indonesia. This investigation is important because the existence of dominant/large controlling shareholders and a high level of ownership concentration could be both a source of and a solution to the conflict of interests inside a firm. The results from this investigation are likely to provide insights and enhance our understanding of the dynamics of major vs minor shareholders conflicts of interest, managers vs shareholders conflicts of interest and the role of political connections.

The second objective is to explore the relationship between political connections and earnings management. In carrying out the analysis, this study examines the trade-offs between real and accrual-based earnings management. Theoretically, real and discretionary accruals earnings management activities are not mutually exclusive strategies, and the concurrent use of both activities could bring more benefits for managers as long as they manage to avoid detection. The results from this study will further add to the documented evidence in developed countries that the two forms of earnings management are substitutes.

The third objective is to examine the relationship between political connections and investment inefficiency, that is, over- and under-investment inefficiency. This investigation is important because previous studies suggest that firms can use political connectedness as a tool to avoid the under-investment inefficiency problem but then face the over-investment inefficiency problem as a consequence of having political connections.

The fourth objective is to further examine the joint effect of political connections and corporate governance quality on firms' internal conflicts of interest, earnings management activities and investment inefficiency. The results from this investigation could further support previous studies' results on the substitutionary relationship between political connections and corporate governance quality or provide novel evidence to support the complementary relationship between political connections and corporate governance quality.

1.3. Why Indonesia?

As political connections remain one of the forefront topics in various aspects of firm-level analysis (i.e., performance, leverage, risk-taking, agency conflicts, earnings management, investment inefficiency, etc.), more results that support both behavioural views are necessary to gain more understanding of the nature and impact of politically connected firms. Thus, it is substantially important to do further research in a country that

may offer more results to support accountable views. There are several reasons why Indonesia would be an appropriate setting to explore the possibility of the accountable behaviour of politically connected firms.

First, Indonesia is a country that has witnessed significant political, economic, and legal reforms. In the past, Indonesia was a country with a weak investor protection system and poor corporate governance implementation. Indonesia became the first country where modern research on political connections was conducted because the 'highly centralized and stable political structure' of Indonesia enables the construction of reliable measures of political connectedness (Fisman, 2001). Indonesia is amongst the countries with the highest level of political connections, along with Russia, Malaysia and Thailand (Faccio, 2006; Faccio, 2010).

However, Indonesia has become a democratic country in the last two decades. The Indonesian political system has experienced a significant reform from an autocratic system with one powerful president who ruled the country over the 1966-1998 period to a democratic state that has elected five different presidents in the past two decades, with the last two of them being the product of direct election by the population (Horowitz, 2013). The centralistic, authoritarian and militaristic political power is being replaced by a decentralist, democratic and civil political power (Booth, 2005). The position of the president on Indonesia after reform is at par with the legislative and judicative powers, and the three branches have independent authority in their respective fields (Crouch, 2010).

Second, the political system changes also coincide with the improvement of corporate governance quality. The involvement of the IMF in providing aid packages for Indonesia entails the requirement for significant institutional reform, involving very comprehensive macroeconomic measures (base money and fiscal deficit targets, structural reforms in the real sectors by removing trade and investment barriers), and financial sector restructuring (Pangestu, 2003).

There are also further measures that improve the corporate governance quality of firms in Indonesia: the adoption of IFRS (an international accounting standard) and global auditing standards (Gamayuni, 2009; Wahyuni, 2011; Arum, 2013), the creation of a national corporate governance body in 1999, followed by the creation of Indonesian Corporate Governance manual with the help of a renowned international body (Indonesian Institute for Corporate Governance, 2001; Komite Nasional Kebijakan Governance, 2006; International Finance Corporation and Indonesia Financial Services Authority, 2012) and the implementation of several new laws that enhance investor

protection and limits controlling shareholders' power (Bapepam LK, 2004; Indonesian Government, 2007; Bapepam LK, 2012).

Third, despite the improvement in the institutional setting, Indonesia is still regarded as a country with a relatively weak legal enforcement and investor protection system (Leuz and Oberholzer-Gee, 2006; Enomoto et al., 2015) and with a high level of ownership concentration (Claessens et al., 2000a; Claessens et al., 2002; Carney and Hamilton-Hart, 2015). The combination of a weak legal and investor protection system and a high level of ownership concentration might encourage more rent-seeking activities (Faccio, 2006; Faccio, 2010; Boubakri et al., 2012b) and exacerbate the expropriation of minority interests (Bona-Sanchez et al., 2014; Habib et al., 2017a), which may reduce the effect of corporate governance improvement.

Fourth, there is the nature of politically connected board members in Indonesia. In many countries, the appointed politically connected board members are active/incumbent politicians such as presidents (Schoenherr, 2019), prime ministers (Bunkanwanicha and Wiwattanakantang, 2009; Saeed et al., 2017), members of parliament (Pham, 2019) or government officials (Fan et al., 2007; Pan and Tian, 2017).

In Indonesia, appointed politically connected board are former politicians, similar to the situation in Spain (Bona-Sanchez et al., 2014) and the United Kingdom (González-Bailon et al., 2013). Active politicians should have considerably more power and significant influence on government decision-making policies and resource allocations than former ones. Moreover, all politically connected board members serve in the non-executive controlling bodies (board of commissioner), and the majority of them are appointed as independent commissioner, whereby one of their main duties is the protection of minority interests (Indonesia Financial Services Authority, 2014).

As a result, the investigation into the role of political connections in Indonesia may provide interesting results that can support the accountable view and give us more evidence that will help us further understand the role and nature of political connectedness and the influence of a country's individual settings on the relationship between political connections and various measures of firm-level analysis.

1.4. The contributions of the thesis

There are several contributions of this study to the existing political connections literature. First, as far as we know, this is the first study that thoroughly present the accountable role of politically connected firms on reducing principal-principal and principal-agent conflicts, mitigating real and discretionary accruals earnings management activities and the improvement of investment efficiency. There have been very limited

studies in the political connections literature which suggest the possibility of accountable behaviour of politically connected firms such as those by Bona-Sanchez et al. (2014, 2019), but even their results are somewhat partial or limited to specific firms (family firms).

Second, based on our knowledge, this is also the first study that gives novel evidence on the complementary relationship between political connections and corporate governance quality. Previous studies on the political connections literature suggest a substitutionary relationship between political connectedness and corporate governance quality. Politically connected firms are associated with poor corporate governance quality because the needs to maintain secrecy on the costs and benefits of having political connections (Chaney et al. 2011). However, politically connected firms with poor corporate governance quality still enjoy easier access to lending (Boubakri et al., 2012a), lower cost of debt (Chaney et al., 2011) and cost of equity (Boubakri et al., 2012b), The results of this study contradicts previous results findings and opened a new avenue of research on the relationship between political connections and corporate governance quality.

Third, this study conducted a regression analysis on both types of potential conflict of interest within the firm, the conflict between majority and minority shareholders (principal-principal conflict) and the conflict between shareholders and managers (principal-agent conflict). Most studies that test firms' internal conflicts of interest focus only on one type of conflict only (principal-principal or agent-principal conflict), which may lead to insufficient evidence about the impact of the conflicts on the firms. Moreover, there have been very limited studies on the role of political connectedness toward these conflicts. This study provides new empirical evidence and the possibility of new research avenue on the relationship between politically connected board members, majority and minority shareholders and managers of the firm.

Fourth, this study contributes to the existing debate on whether there is a trade-off (substitutionary relationship) between real and discretionary accruals earnings management activities (Cohen and Zarowin, 2010; Enomoto et al., 2015; Kothari et al., 2016; Choi et al., 2018), or whether managers actually use both types of earnings management activities simultaneously (complementary relationship) (Ibrahim et al. 2011; Chen et al., 2012a) and their relationship with political connectedness. Most studies that test the relationship between political connections and earnings management activities focus on the trade-off between real and discretionary accruals earnings management activities for different institutional settings, neglecting the impact of an individual country

setting. In many cases, the trade-off proposition also ignores the fact that managers in some countries may have more incentives and more capability to use both earnings management activities concurrently and strategically in a way that would further maximise the managers' utility. Thus, by exploring the trade-offs and interactions among two different types of earnings management activities, the results of this study may provide an enhanced understanding of the consequences of the concurrent use of both earnings management activities.

Fifth, this study also complements previous studies that examine the relationship between political connections and investment inefficiency (Chen et al., 2011c; Ling et al., 2016; Chen et al., 2017a; Hou et al., 2017; Saeed et al., 2017) by shedding further light on the possibility of the role of political connections in alleviating the under-investment problem without aggravating the over-investment problem, which results in a lower level of investment inefficiency.

Finally, the findings from this study could provide the basis for regulators in many countries experiencing similar problems regarding the negative impact of political connectedness, and for the government of countries that experience institutional setting changes from an autocratic ruler to a more democratic system, such as those in the Middle Eastern, South American, and African regions.

1.5. The structure and findings of the thesis

The remainder of the thesis is organised as follows. ***Chapter 2*** presents the background to Indonesia's institutional settings, including changes in the political system from an autocratic to a democratic system, freedom of the press, financial institution reform, the improvement of corporate governance quality and the implementation of new corporate laws that provide increased protection for investors and creditors.

Chapter 2 also presents detailed descriptive analyses of ownership structures among listed firms in Indonesia. The descriptive statistics indicate that most of the listed firms have highly concentrated ownership with family, corporation, and state as the dominant controlling shareholders. This investigation helps to gain useful insights into the corporate ownership structure in Indonesia.

Chapter 3 presents the data and research methodology. Using a unique dataset consisting of 1,590 observations, representing a sample of non-financial Indonesian listed firms during the period 2010-2015. The data reveal that on average, politically connected firms have a higher corporate governance quality index score, are more likely to appoint a big four public accounting firms as their external auditors and have a higher level of

disclosures. These descriptive statistics suggest the possibility of complementary relationship between political connectedness and corporate governance quality that might protect the interests of minority shareholders in settings characterised by a weak legal protection system and the presence of dominant controlling shareholders.

Chapter 3 also discussed the research methodology used throughout the thesis. The existence of endogeneity issues explained the necessary use of Heckman treatment effect on this study. The reasons and justification for the regression models used for the thesis are also explained in this chapter.

Chapter 4 presents the empirical analyses of the relationship between political connections and firms' internal conflicts of interest (principal-principal and agent-principal conflicts). To conduct the empirical analysis, panel data regressions using the Heckman treatment effect with the maximum likelihood approach are used. This method is used throughout the whole empirical analysis since it is the best and most relevant model to tackle the endogeneity problem in our investigation. The empirical results show that political connectedness is related to a lower level of firms' internal conflicts of interest (for both principal-principal and agent-principal conflicts). Moreover, further analysis points out that political connections are only effective in reducing principal-principal and agent-principal conflicts in firms with a higher level of corporate governance quality. Interestingly, political connections exacerbate principal-principal and agent-principal conflicts in firms with weak corporate governance quality.

Chapter 5 explores the relationship between political connections and earnings management, especially on the trade-offs and interactions between real and discretionary accruals earnings management activities. Previous studies provide mixed results on the trade-offs and interactions between real and discretionary accruals earnings management activities. On the one hand, several cross-country studies suggest that there is a trade-off relationship between accruals and real earnings management activities. In countries with stronger investor protection and legal protection systems, the management of the firms has shifted from more detectable accruals earnings management to the more secretive real earnings management activities (Enomoto et al., 2015; Choi et al., 2018).

On the other hand, several other studies suggest that managers use a coordinated approach using both types of earnings management activities strategically and concurrently to achieve their earnings target more effectively (Chen et al., 2012a). The results suggest that managers do use both earnings management activities concurrently. These results support the view that managers in countries with weak investor protection

and legal systems have more incentives and relatively little restriction to use both types of earnings management concurrently (Chen et al., 2012a; Hamza and Kortas, 2019).

Additionally, further analysis shows that political connections are only apparent in reducing real and discretionary accruals earnings management activities among firms with a higher level of corporate governance quality. For firms with a lower level of corporate governance quality, not merely ineffective, the existence of political connections can actually increase firms' real and discretionary accruals earnings management activities.

Chapter 6 provides the empirical analyses of the relationship between political connections and investment inefficiency. The empirical results indicate that a higher level of political connections is associated with a lower level of overall investment inefficiency, that is, over- and under-investment inefficiency. Further analysis suggests that political connections are only effective at reducing investment inefficiency in firms with a higher level of corporate governance quality. However, the results regarding firms with a lower level of corporate governance quality are slightly different from previous chapters. While not effective, political connections do not worsen investment inefficiency for firms with a lower level of corporate governance quality.

Overall, the results of all the empirical analyses are consistent with the view that political connections can be used as a governance device in reducing principal-principal and agent-principal conflicts, earnings management activities, and investment inefficiency, supporting the accountable behaviour view.

Finally, ***Chapter 7*** summarises the findings of the descriptive and empirical analyses along with the implications of such findings for regulators. The chapter also discusses the major limitations of the research and potential avenues for future research as well as the student personal reflections on his study process.

CHAPTER 2

INSTITUTIONAL SETTING

2 Institutional setting

This chapter presents relevant information about the institutional settings, corporate governance structures, ownership features and the nature of political connections using a unique dataset that represents a sample of non-financial Indonesian listed firms during the 2010-2015 period. Previous academic research on political connections places an important emphasis on institutional settings. In a less democratic country with a high level of corruption and a weak legal system, political connections become a tool for politicians and firms to extract maximum benefits for themselves via rent-seeking activities that hamper the economic growth of a country (Murphy et al., 1993).

Previous literature also suggests that democracies, political stability, a strong legal system (Lederman et al., 2005), freedom of the press and anti-corruption measures can mitigate rent-seeking activities (Chen et al., 2010) and reduce the corruption level (Brunetti and Weder, 2003; Djankov et al., 2010) while higher disclosure requirements and public monitoring can increase government quality and make politicians accountable (Djankov et al., 2010).

As a result, in a democratic country with a low level of corruption and a strong legal system, political connections become tools for politicians to relay the demands of their constituents more directly to firms, and firms with political connections benefit from enhanced performance via the politicians' expertise as well as enhanced reputation since politicians will usually choose well-established firms with low risks (Niessen and Ruenzi, 2010).

The first modern literature on political connections by Fisman (2001) was conducted in Indonesia because Indonesia's political system and institutional setting enabled Fisman to construct a credible index of political connectedness, concentrating on one single powerful individual, President Soeharto. Borsuk and Chng (2014) provide an anecdotal example of this power, in the case of the coalition between Soeharto and the Salim Group in the establishment of Bogasari Flour Mills, a wheat milling company (whereby the Salim Group held the only rights for importing wheat to Indonesia) in May 1969. The firm was founded with 100 million rupiahs (±$ 238,000 at that time) registered capital and then received 2.8 billion rupiahs (±$ 6.67 million at that time) credit from state-owned banks only 5 (five) days after its establishment, and its article of association required the firm to donate 26% of its profit to a foundation chaired by Soeharto's wife.

The downfall of Soeharto in May 1998 after 32 years of power in Indonesia (Eklöf, 1999) also have a significant effect on the Salim Group. The aftermath of the financial crisis and political reform resulted in a banking system disaster which led to one of the

costliest bank reform programs in the world, reaching 700 trillion rupiahs (±$ 70 billion) or over 40% of Indonesia's GDP (Indrawati, 2002; Pangestu, 2003), whereby one of the largest banks being bailed-out was the Salim Group's Bank Central Asia.[2]

2.1 Democratic political system

From 1966 to 1998, Indonesia was run by a very powerful ruler who maintain his power for 32 years, Soeharto. The Soeharto era was similar to authoritarian regimes in other countries, whereby the general election was just a formality, the military-controlled every aspect of life, and criticism of the government was banned (Crouch, 1978; Crouch, 1980; Eklöf, 1999; Crouch, 2010).

Indonesia's political system in the post-Soeharto era became a democracy. Booth (2005) suggests that the centralistic, authoritarian, and militaristic political power is being replaced by a decentralist, democratic and civil political power. As a result, there have been five different presidents in the past two decades, with the last two of them being the product of direct election by the population, compared to one president for 32 years, elected by the general assembly during Soeharto's era.[3]

The changes in the political landscape have also brought significant changes in the balance of political power. Wanandi (2012) suggests that during the Suharto era, the House of Representatives had very limited authority and was not able to be critical of

[2] The Salim Group has entered an agreement with the Indonesian government (MSAA) to pledge some of its company assets to be sold as a repayment of this fund. MSAA (Master Settlement and Acquisition Agreement) allowed owners of banks that received liquidity funding during the financial crisis such as the Salim Group to settle their debts by surrendering assets of the equivalent value of the debt to IBRA (Indonesian Banking Restructuring Agency). The Salim Group surrendered the assets from 107 companies under their flagship group, from various industries (automotive, property, cement, chemical, agriculture, mining, media, trading and food industry) with differing percentages of shares being pledged (from as low as 5% of First Pacific shares to 73% of Indomobil shares) (Dieleman, 2007). As a result of MSAA, several of Salim Group's core business firms are now in the hands of other companies, domestic and foreign. BCA, the largest private bank in Indonesia, is now held by the Hartono family, the owner of Djarum group. Indocement, the largest private cement company in Indonesia, is now held by Heidelberg. Indomobil, the second largest automotive producer in Indonesia, is being taken over by the Trimegah group. Metropolitan Kentjana, the property company for elite housing in Jakarta, was bought by the Berca group, Poo family, etc. (Dieleman, 2007; Borsuk and Chng, 2014)

[3] From the 2004 general elections onward, the president and vice president positions are no longer appointed via the People's Consultative Assembly meeting but are elected via a direct election by the Indonesian people. Moreover, since 2005, the governors and mayors have also no longer been appointed by the government (president) but are also elected via direct regional elections along with regional and district people's representative council elections. The judicial branch stands coequal with the executive and legislative branches. Justices of the Supreme Court and Constitutional Court are nominated by the independent Judicial Commission for approval by the parliament and formal appointment by the president. The chief justice and deputy chief justice are elected by and from the justices. Members of the Judicial Commission must have a legal background or experience and are appointed and dismissed by the president with the approval of the parliament.

government policy. Furthermore, Pompe (2005) also indicates that the Supreme Court was not independent and their de facto power was placed below the executive power.

The position of the president in Indonesia after the reform is on par with the legislative and judicative powers, and the three branches have independent authority in their respective fields (Crouch, 2010). Moreover, Mietzner (2013) also suggests that the military power is now put under civil supremacy and the military role in politics and business activities is reduced.

2.2 Freedom of the press

Soeharto also started his power in Indonesia with a crackdown on the press. Nearly one-third of the newspapers in Indonesia were shut down in the first five years of Soeharto's reign, and the surviving publications had to adhere to strict state control and censorship via the 'all-powerful' Information Ministry (Hill, 2006).

The changes in the political system have also affected the Indonesian press. Soeharto's immediate successor, BJ Habibie, signed the 1999 Press Law, which redefined Indonesian press-government relations, effectively eliminating the state control of the media that was so pervasive under Soeharto's rule (Steele, 2012).

Although not perfect, the freedom of the press remains in current Indonesia, with the press facing challenges no longer from state censorship but from using the freedom to produce balanced reporting (Hanitzsch, 2005) and from the convergence of media platforms via the advancement of digital technologies, the internet, and social media (Tapsell, 2015).

2.3 Financial institution reform

As a result of the Asian financial crisis in 1997, Indonesia entered into an agreement with the International Monetary Fund (IMF) in October 1997 to overcome the effect of this crisis (Robison and Rosser, 1998). "Financial restructuring is at the heart of the IMF program in Indonesia" (Indrawati, 2002, p.582). Thus, IMF aid packages for Indonesia also entail the requirement for significant institutional reform, involving very comprehensive macroeconomic measures (base money and fiscal deficit targets, structural reforms in the real sectors by removing trade and investment barriers) and financial sector restructuring (Pangestu, 2003).

Indrawati (2002) suggests that although some of IMF programs were met with a different approach by three different presidents (Habibie, Wahid, and Soekarnoputri), the Indonesian government made a strong effort regarding the implementation of the

financial restructuring program. Pangestu (2003) indicates that in the end, more than half of the IMF's reform program was implemented in Indonesia.

2.4 Corporate Governance

According to Johnson et al. (2000), the corporate governance measure is a better predictor than macroeconomic measures during the Asian financial crisis of 1997-1998. While Indonesia had a balanced government budget and a relatively moderate amount of reserves – a sign of a good economy – one year before the crisis, Indonesia had one of the worst corporate governance scores among the East Asian countries.

Johnson et al. (2000) indicate that Indonesia has the worst score for judicial efficiency and corruption, with no available data on what kind of standard the accounting reports use, and relatively a low score for investor protection. Before the 1997 financial crisis, there was very little regard regarding corporate governance practice among Indonesian firms. However, even with bad governance and a lack of transparency, Indonesian firms were still able to gain wide trust and expand their business progressively via the use of domestic and foreign loans (Indrawati, 2002). This might also be supported by the high return of assets for Indonesian firms compared to other countries in the years before the financial crisis (Claessens et al., 2000b).

The combination of crony capitalism (Claessens et al., 2000a), a weak legal system (Indrawati, 2002), weak corporate governance and moral hazard (Pangestu, 2003) led to the abuse of the banking sector by conglomerates in Indonesia and resulted in Indonesia becoming one of the countries to suffer the worst effects of the financial crisis, with a costly banking sector reform (Indrawati, 2002; Pangestu, 2003).[4]

The changes in the political system and financial institution reform also brought about regulations that concerned good corporate governance implementation and improving the transparency level of public listed firms via broader disclosure requirements as one of the main concerns of the IMF (Indrawati, 2002; Boediono, 2005).

The improvement of corporate governance in Indonesia can be seen in the adoption of IFRS (an international accounting standard) and global auditing standards (Gamayuni, 2009; Wahyuni, 2011; Lestari and Takada, 2015; Luthan and Satria, 2016; Maradona and

[4] Fane and McLeod (2002), Indrawati (2002), and Pangestu (2003) suggest that the failure of the Indonesian banking sector was one of the costliest bank reform programs in the world, reaching 700 trillion rupiahs or over 40% of Indonesia's GDP. Only about 12% of that amount could be recovered through the sales of assets of several big business groups. These assets were handed over to the government as a replacement for the bailout funds received by banks owned by these business groups (Borsuk & Chng, 2014; Indrawati, 2002; Pangestu, 2003).

Chand, 2018), the creation of a national corporate governance body in 1999[5], followed by the creation of the Indonesian Corporate Governance Manual (Indonesian Institute for Corporate Governance, 2001; Komite Nasional Kebijakan Governance, 2006; International Finance Corporation and Indonesia Financial Services Authority, 2012).[6]

The adoption of the International Financial Reporting Standards (IFRS) in Indonesia was a long process that started in 2007, and the process of full convergence with the IFRS standards was still progressing in 2016 (Maradona and Chand, 2018). Effective from 1 January 2012, listed firms in Indonesian Stock Exchange have to follow the new Indonesian Accounting Standard (PSAK) for publishing their financial statement reports. The new PSAK standard is mostly aligned with the 2009 IFRS standards (Luthan and Satria, 2016).

The four different approaches a country can choose in adopting IFRS are 1) full adoption of IFRS; 2) selective adoption of IFRS or adoption with a time lag; 3) IFRS adoption with modification to account for country-specific characteristics; and 4) preservation of national accounting standards but in harmony with IFRS (Chand and Patel, 2008). Indonesia follows a combination of the second and third approaches. Indonesian PSAK is adopting IFRS standards into local accounting standards gradually with minor modifications made to align the standards with Indonesian regulations (Lestari and Takada, 2015; Maradona and Chand, 2018).

By 2015, the new 2015 Indonesian PSAK edition was largely aligned with the 2014 IFRS standards, with the exception of 9 standards, or the reduction from a three-year gap (2009-2012) to just a one-year gap (2014-2015). However, with no apparent deadline for full convergence set, the focus of the standard-setting accountant body in Indonesia is to maintain the one-year gap between the Indonesian accounting standards and IFRS (Maradona and Chand, 2018).

The Indonesian Corporate Governance Manual disclosure consists of twenty-six categories, namely board of commissioners (BOC), board of directors (BOD), and audit committee (AC) responsibilities, activities, assessment, affiliation and remunerations, majority and ultimate shareholders disclosure, internal and external auditors, risk management and internal control, CSR and code of ethics, further detailed into 95 items that are required to be disclosed by public listed firms.

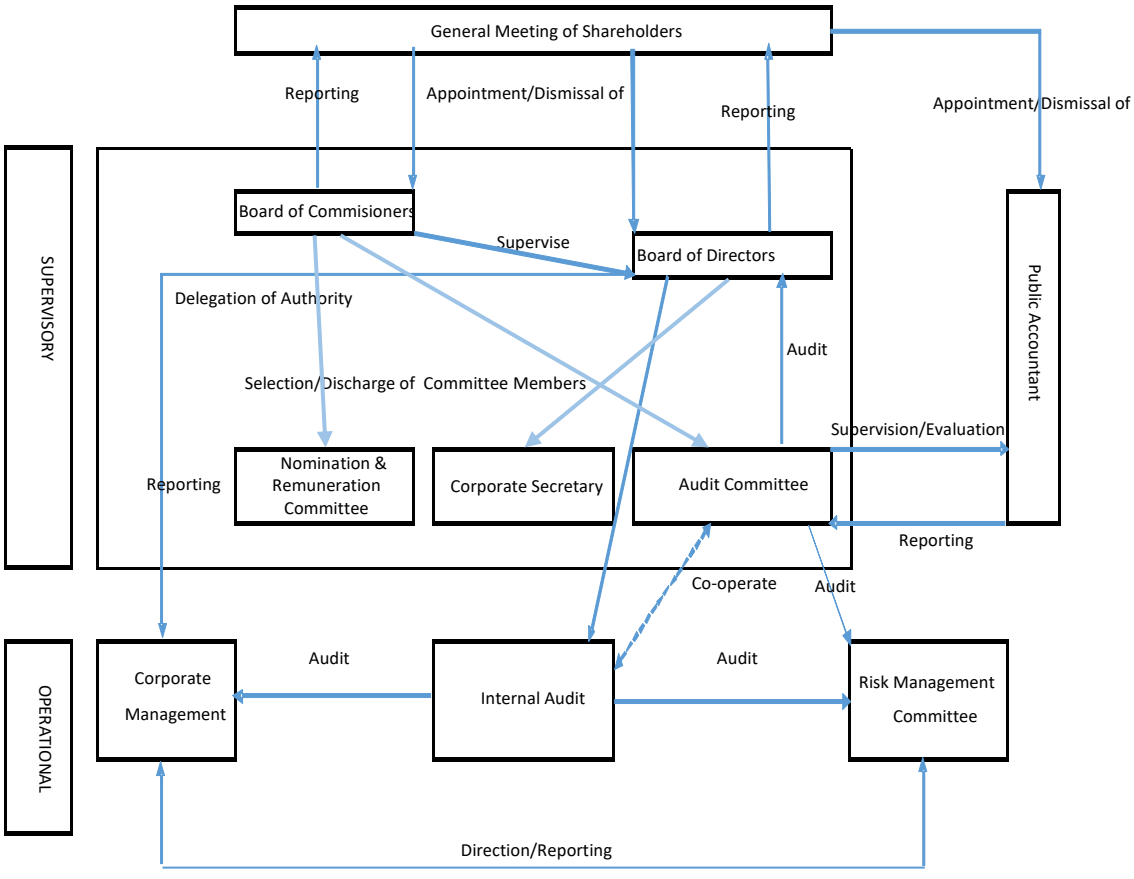
[5] Coordinating Minister for Economic, Financial & Industrial Ministry Decree No.KEP/31/M.EKUIN/08/1999.

[6] The latest two versions of Indonesian Corporate Governance Manual are joint projects with International Finance Corporation, an international body under the World Bank.

The improvement of disclosure quality can be seen from the availability of complete financial and annual report data. From 2010 onwards, there was almost 100% availability of financial and annual reporting for public listed firms in Indonesia, with the average disclosure index increasing from a 25% compliance level in 2010 to a 46% compliance level in 2015.

Indonesia is adopting a two-tier board system of firm structure like those used in continental Europe countries (Netherland, France, Germany, Denmark, etc), China and Taiwan (Adams and Ferreira, 2007; Belot et al., 2014). Figure 2-1 shows the mechanism of the two-tier board system in Indonesia. The main difference between the two-tier board system and the unitary board system is the separation of non-executive and executive directors into two tiers of boards, the board of commissioners and board of directors. In Indonesia, these separations are also followed with the regulation that the two bodies cannot be held by the same personnel, thus mitigating the potential problem of CEO duality that may occur in a one-tier board system.

Figure 2-1. Indonesian listed firm Corporate Governance Mechanism



Source: Summarised from Indonesian Corporate Governance Manual 2012(International Finance Corporation and Indonesia Financial Services Authority, 2012)

The board of commissioners acts as a supervisory board and solely consists of non-executive directors, while the board of directors consists of executive directors and is in charge of the firm's day-to-day operations.[7] Members of the board of commissioners and board of directors are appointed via the annual general shareholders meeting (AGSM) mechanism, whereby the maximum period of appointment is 5 years per term of tenure (International Finance Corporation and Indonesia Financial Services Authority, 2012).

The qualifications for BOC and BOD members are the following: have good manner, morals and integrity; in the period of five years prior to appointment and during appointment period not been declared bankrupt; never been a BOC/BOD member found guilty of causing bankruptcy to a firm; never been punished for crimes related to the public and financial sectors; never been a member of a BOC/BOD that never held an AGSM, never submitted a responsibility report to AGSM or ever had its responsibility report rejected by AGSM; never caused a listed firm to not report a financial statement and/or an annual report; have a strong commitment to follow the rules and regulations; and have the necessary skills and knowledge to serve on the firm (Indonesia Financial Services Authority, 2014).

The board of commissioners acts as representatives of shareholders, that is, both controlling or minority shareholders. To make sure that minority shareholders' interest is protected, the regulation requires that at least 30% of the board of commissioner member comprise independent commissioner(s).[8] Their main task is supervising the management (board of directors) and making sure the management team aligned with the shareholders' interest (International Finance Corporation and Indonesia Financial Services Authority, 2012).

2.5 Indonesian Capital Market

The Indonesian Capital Market is operated under the Government Law No.8/1995 regarding the capital market. Initially, the Jakarta Stock Exchange (JSX) was opened in 1977 under the supervision of the Capital Market Supervisory Agency (Bapepam). In 1992, JSX was privatized and in 1995 it became the Indonesian Stock Exchange (IDX) in accordance with the new law. Effectively by January 2013, the role of Bapepam in

[7] A typical BOD in Indonesia usually consists of a board chairman (CEO), finance director, operational director, marketing director and general affair/human resources director.

[8] There are four additional requirements for the independent commissioner position in Indonesia's listed firms than for non-independent commissioner, which relate to financial, familial, ownership or business affiliation with the listed firm. Due to their independency, independent commissioners are expected to act in the best interest of the firms and not only in the managers' or the majority shareholders' interests.

Indonesia was replaced by the Indonesia Financial Service Authority (OJK) as part of the financial structure reform.

The Indonesian capital market has shown impressive growth since the financial sector reform in Indonesia, with its market capitalization increasing from 260 billion rupiahs to 4.9 trillion rupiahs during the 2000-2015 period (see Figure 2.2). The global financial crisis halted the growth in 2008, but the IDX has since recovered. The growth of market capitalization slowed down significantly in the last four years because mining and agriculture companies, which comprise 45% of market capitalization, are suffering the effect of low global commodities prices. Table 2-1 shows the development of the Indonesian capital market in the 2000-2015 period.

Figure 2-2. Indonesian Capital Market – Stock Market Capitalization 2000-2015

Source: Different issues of Indonesian Stock Exchange Annual Report

The reform also seems to have activated bond trading in the Indonesian capital market, from just 391 trillion market capitalizations of government bonds in 2003 to 5,236 trillion market capitalizations of various types of bonds (government, corporate, and asset-backed) in 2015. The development of the Indonesian capital market seems to confirm (La Porta et al., 2000) suggestion regarding the effect of improving the corporate governance and investor protection system. Further investigation could also reveal whether the dispersion of ownership and efficient capital allocation also occurred along with it.

Table 2-1. Indonesian Stock Exchange Main Indicators

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Stock Market Trading																
Volume (billion shares)	135	148	171	234	412	402	437	1,040	788	1,468	1,331	1,204	1,054	1,343	1,327	1,446
Value (trillion rupiah)	123	98	121	125	247	406	446	1,050	1,065	975	1,176	1,223	1,116	1,522	1,453	1,406
Number of trades (thousand)	4,593	3,622	3,092	2,953	3,724	4,012	4,811	11,861	13,417	20,977	25,919	28,023	29,941	37,499	51,458	54,066
Average daily trading volume (million shares)	563	603	699	967	1,709	1,654	1,806	4,226	3,283	6,090	5,432	4,873	4,284	5,503	5,484	5,928
Average daily trading value (billion rupiah)	514	396	493	518	1,025	1,671	1,842	4,269	4,436	4,046	4,801	4,963	4,537	6,238	6,006	5,764
Average daily trading trades (thousand)	19	15	13	12	16	17	20	48	56	87	106	113	122	154	213	222
Bond Market Trading Value																
Government Securities (trillion rupiah)	n/a	n/a	n/a	444	743	642	716	1,075	953	800	1,437	1,964	1,996	1,878	2,838	3,400
Government Securities (million USD)	n/a	n/a	n/a	-	-	-	-	-	-	-	-	-	-	22	149	1,493
Corporate Bond (trillion rupiah)	n/a	n/a	n/a	14	18	27	33	69	53	39	90	126	160	186	168	188
Corporate Bond (million USD)	n/a	n/a	n/a	-	-	-	4	2	9	18	-	90	26	18	10	7
Assets-backed securities (billion rupiah)	n/a	n/a	n/a	-	-	-	-	-	-	11	267	534	159	383	289	340
Market Capitalization																
Equity (trillion rupiah)	260	239	268	460	680	801	1,249	1,988	1,076	2,019	3,247	3,537	4,127	4,219	5,228	4,873
Government Securities (trillion rupiah)	n/a	n/a	n/a	391	400	400	419	478	526	582	641	724	821	995	1,210	1,426
Government Securities (million USD)	n/a	n/a	n/a	-	-	-	-	-	-	-	-	-	-	190	540	1,040
Corporate Bond (trillion rupiah)	n/a	n/a	n/a	-	-	58	62	79	73	88	115	147	187	218	224	250
Corporate Bond (million USD)	n/a	n/a	n/a	-	-	-	-	-	105	105	105	80	100	100	100	100
Assets-backed securities (billion rupiah)	n/a	n/a	n/a	-	-	-	-	-	-	450	1,020	1,490	1,980	2,360	3,060	2,420
Listed Companies																
Equity	287	316	331	333	331	336	344	383	396	398	420	440	459	483	506	521
Government Securities	n/a	n/a	n/a	52	48	49	56	65	70	79	81	89	92	96	90	92
Corporate Bond	n/a	n/a	n/a	92	107	106	101	102	90	88	86	96	99	109	108	103

Source: Different issues of Indonesian Stock Exchange Annual Report

2.6 Implementation of new laws and regulations

The development of Indonesian Corporate Law and the Indonesian Corporate Governance Manual after the reform movement in Indonesia was conducted with the awareness of several problems in the Indonesian setting, namely the monopolies or large major role of state-owned enterprises in many important sectors of Indonesia's economy, such as those in the banking, electricity, mining, oil and gas, post and telecommunications, railways and shipbuilding sectors; the concentrated ownership structure combined with a lack of supervisory activities and proper book-keeping; little separation of ownership and control in the form of participation of major shareholders in the management of the firm; and a lack of experience in the field of corporate governance for many board members (International Finance Corporation and Indonesia Financial Services Authority, 2012).

One important piece of legislation that shows the commitment of Indonesian government to improving the corporate governance implementation of all Indonesian firms (private and state-owned enterprises, both listed and non-listed firms) after the 1998 reform movement is the 2007 Indonesian Company Law (Indonesian Government, 2007).

The 2007 Law is an amendment of the 1995 Indonesian Company Law, and several important amendments in this new law are the incorporation of corporate social responsibility as part of the company article of association (AoA), the revised role of the board of commissioners' rights and responsibilities, a more detailed explanation on the mechanism of the two-tier board system, as well as increased requirement of the transparency of corporate planning, corporate actions and corporate reporting activities.

The 2007 Law was later followed by a more stringent regulation for listed firms, the Indonesian Capital Market Authority (Bapepam LK) regulation number X.K.6 regarding the publication of the annual report for listed firms (Bapepam LK, 2012). The regulation required listed firms in Indonesia to submit an annual report to Bapepam LK and publish that report on the firm's website no more than four months after the fiscal year period has ended.

The report must contain at least the 1) financial and operational highlights; 2) board of commissioners' report; 3) board of directors' report; 4) company profile; 5) management discussion and analysis; 6) corporate governance; 7) corporate social responsibilities; 8) audited financial statement report; and 9) statement of the members of the board of commissioners and board of directors on the responsibility for the truthfulness of the annual report's content.

One important detail that differentiates Indonesia from other developing countries in implementing these changes lies in the background of the political and social systems.

The Asian financial crisis of 1997-1998 did not alter the political system in many of the affected Asian countries. While there were changes of political leadership in three of the four countries which were hit the hardest by the crisis, namely Indonesia, South Korea and Thailand (there were no political leadership changes in Malaysia, the fourth country), only in the Indonesian political system did changes also occur (Haggard, 2000).

The demise of the old authoritarian ruler in Indonesia after the financial crisis allowed the country to implement the reform project on a clean slate status. Although Soeharto's demise did not automatically lead to the removal of all the distortions of the political and economic systems, it helped to build up pressure and momentum for political and economic reform, also supported by the emergence of an independent and vibrant press after the reform (Ahmad and Ghoshal, 1999).

The clean slate allows Indonesia to implement most of the structural reforms that were required by the IMF. These reforms are linked to international best practices and codes, such as those found in Basle, the Code of Good Corporate Governance, International Accounting Standards and other such institutions (Pangestu, 2003).

While the implementations process is not perfect and a lot of improvements are still required, the effect of the political and financial system reform is apparent from the development of the Indonesian capital and bond markets, which displayed an impressive growth after financial sector reform in Indonesia.

The recognition that the significant changes in Indonesia's political system and institutional setting are beneficial for development also stems from an international institution, with the improvement of Indonesia's ranking in the World Bank Doing Business Index and the Transparency International Corruption Perception Index (CPI). Indonesia's ranking in the World Bank Doing Business Index improved from 115 in 2006 report (World Bank, 2005) to 72 in the 2018 report (World Bank, 2017), while Indonesia's position in CPI improved from the worst position (100th percentile) in 1995 to the middle (51st percentile) in 2016.

2.7 Ownership concentration and identity of controlling shareholders

In emerging countries like Indonesia, besides widely held corporations, family firms and state-owned enterprises also played a major role in the capital market (Claessens et al., 2000a; Carney and Hamilton-Hart, 2015). A higher level of ownership in fewer major shareholders could lead to a higher level of potential conflicts between majority and minority shareholders (Claessens et al., 2000a; Villalonga and Amit, 2006),

a higher level of earnings management activities (Jiang et al., 2010; Su et al., 2014), and a higher level of investment inefficiency (Chen et al., 2017a).

Table 2.4 presents the average percentage of shares held by the top five largest shareholders for each sample year. It appears that almost half (49.82%) of sample firm shares, on average, are held by a single shareholder and that the largest shareholders constitute a large amount of ownership concentration in Indonesia's listed firms. The relatively high level of shareholding by the largest shareholders reflects a significant amount of power for the controlling shareholder and the ability to influence key decision making inside the firm (Claessens et al., 2002; Adams and Ferreira, 2007; Dahya et al., 2008).

This value is also among the highest in East Asian countries. Carney and Child (2013) find that the largest shareholders control 47% of shares of the largest firms in the Philippines, 45% for Hong Kong firms, 37% for Singaporean firms, 35% for Malaysian and Thai firms, 34% for Japanese firms, and 25% and 24% for Taiwanese and Korean firms, respectively. It is also higher than those of firms in China, where Chen et al. (2017a) find that the largest shareholders control 35.9% of shares.

Meanwhile, the percentage of ownership by the five largest shareholders remained steady at around 71%-73% during the 2010-2015 period. This value of ownership concentration is also higher than in previous studies, such as 23.40% in the USA (Chen and Yur-Austin, 2007), 34.6% in the UK (Florackis et al., 2009), and 52.7% in China (Chen et al., 2017a).

Furthermore, Table 2.5 presents detailed information about the distribution of the top five largest shareholders for each industry sector group. As can be seen from the table, the average fraction of shares held by the largest shareholder in the consumer goods sector is 58.66%, which is the highest among all sectors, while that in the agriculture sector is the lowest, with 44.19%. It is not surprising, therefore, to find that the ownership in the consumer goods sector, with a value of 78.21%, is more concentrated than in the other sectors. Consequently, it is reasonable to note that the free float ratio, which ranges from 21.79% to 38.15%, is higher in the agriculture sector than in the consumer goods sector.

Table 2-2. Sample size by sector and year

No	Industry Sector	2010		2011		2012		2013		2014		2015	
		Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
1	Agriculture	13	4.91	13	4.91	13	4.91	13	4.91	13	4.91	13	4.91
2	Mining	21	7.92	22	8.30	23	8.68	23	8.68	23	8.68	23	8.68
3	Basic Industry & Chemicals	46	17.36	46	17.36	46	17.36	46	17.36	46	17.36	46	17.36
4	Miscellaneous Industry	23	8.68	23	8.68	23	8.68	23	8.68	23	8.68	23	8.68
5	Consumer goods Industry	26	9.81	26	9.81	26	9.81	26	9.81	26	9.81	26	9.81
6	Property, Real Estate & Construction	44	16.60	44	16.60	44	16.60	44	16.60	44	16.60	44	16.60
7	Infrastructure & Transportation	20	7.55	20	7.55	20	7.55	20	7.55	20	7.55	20	7.55
9	Trade & Services	72	27.17	71	26.79	70	26.42	70	26.42	70	26.42	70	26.42
	Total	265	100.00	265	100.00	265	100.00	265	100.00	265	100.00	265	100.00

This table shows the sample size over the period (2010-2015) classified by sector and year. This study follows the Jakarta Stock Industrial Classification (JASICA) Index used by the Indonesian Stock Exchange. According to this classification, all listed companies are classified into 9 broad economic sectors. Utility and Financial sectors, which include Banks and Financial Services Firms other than banks, are excluded due to their disclosure uniqueness.
Source: The Indonesian Exchange (IDX)

Table 2-3. Top five largest shareholders by year

	2010	2011	2012	2013	2014	2015	All year
Largest shareholder	49.52	49.66	49.72	49.81	50.22	49.99	49.82
Second largest shareholders	13.45	13.06	12.38	12.33	12.46	12.46	12.69
Third largest shareholders	5.43	5.66	5.82	5.37	5.33	5.54	5.53
Fourth largest shareholders	2.61	2.65	2.76	2.48	2.48	2.75	2.62
Fifth largest shareholders	1.68	1.52	1.61	1.48	1.59	1.54	1.57
Top5 Ownership concentration	72.69	72.55	72.29	71.47	72.08	72.28	72.11
Free float	27.31	27.45	27.71	28.53	27.92	27.72	27.89

This table provides the average percentage of firm‘s shares held by the largest five shareholders of firm‘s shares and the average number of those shareholders over the period of 2010-2015.

Table 2-4. Distribution of large shareholders by sector

No	Industry Sector	Largest %	2nd largest %	3rd largest %	4th largest %	5th largest %	Total top5 %	free float %
1	Agriculture	44.19	10.52	3.60	2.09	1.45	61.85	38.15
2	Mining	49.40	11.15	4.25	1.86	1.09	67.75	32.25
3	Basic Industry & Chemicals	47.98	15.22	6.77	3.05	1.79	74.81	25.19
4	Miscellaneous Industry	51.13	13.24	6.46	2.41	1.19	74.43	25.57
5	Consumer goods Industry	58.66	9.65	4.35	3.06	2.49	78.21	21.79
6	Property, Real Estate & Construction	46.54	11.03	5.94	2.79	1.47	67.77	32.23
7	Infrastructure & Transportation	50.28	12.34	5.65	1.98	1.05	71.30	28.70
9	Trade & Services	50.42	14.01	5.31	2.66	1.61	74.01	25.99
	Average	49.82	12.69	5.53	2.62	1.57	72.23	27.77

This table provides the percentage of firm‘s shares held by the largest shareholders classified by industry sector over the period of 2010-2015.

Another fact that is noteworthy is the ownership concentration of the second to fifth largest shareholders. The highest level of the second to fifth largest shareholders is in the basic industry and chemical sector. The ownership concentration for this industry sector might indicate a higher level of minority shareholder power. This situation is understandable because a lot of firms in this particular sector are a joint venture between local firms and multinational corporations or firms that have foreign/international investors as shareholders.

Table 2-5. Percentage and identity of large shareholders

	10% cutoff	20% cutoff	30% cutoff	50% cutoff
Family	65.35	63.71	60.25	47.55
Foreign Corporation	26.98	21.82	18.49	11.19
Domestic Corporation	21.01	16.35	14.72	9.31
Government ownership	6.92	6.48	5.35	4.91
Foreign Institutional Shareholders	23.02	5.91	1.38	0.13
Domestic Institutional Shareholders	4.78	1.13	0.57	0.00

This table shows the identity of the largest shareholders at 10%, 20%, 30% and 50% cut-off points over the period of 2010-2015.

Since the percentage of shareholding by the largest shareholders in Indonesia is higher than in other countries and the average is near 50%, a higher level of cut-off for the identification of controlling shareholders might be required. While previous studies normally use the 5%, 10% and 20% cut-offs, we are using 10% 20% 30% and 50% cut-offs instead. Table 2.6 indicates that the 30% cut-off criterion is the best option to avoid overlap between the different types of ownership. The 30% cut-off shows that 60.25% of firms are controlled by family businesses, 33.21% by corporations and 5.35% by the state and/or governmental agencies.

Regarding family ownership, there are two major theories on the characteristics of family firms in relation to political connections, firms' internal conflicts of interest, earnings management and investment inefficiency, namely agency theory and stewardship theory.[9] The proponent of stewardship theory believes that the family, as the

[9] According to Mazzi (2011), there are actually three major theories on family firms. However, the third theory, the resource-based view, is more relevant for strategic management topics and is thus not relevant for this research. According to Davis, Schoorman, and Donaldson (1997), "*in stewardship theory, the model of man is based on a steward whose behaviour is ordered such that pro-organizational, collectivistic behaviours have higher utility than individualistic, self-serving behaviours*" (p. 24). On the other hand, agency theory suggests the opposite approach. According to Jensen and Meckling (1976), an agency relationship is a situation in which principals (owners) delegate some authority to agents (managers) to act

controlling ownership in a family firm, always acts in the long-term interest of the firm. Prencipe, Bar-Yosef, Mazzola, and Pozza (2011) indicated that family firms in Italy, especially with family members on the board of directors, are less likely to be involved in income smoothing activities than non-family firms. Family firms tend to engage in earnings management activities that have a positive effect on a firm's going concern such as alleviating debt covenant violations (Prencipe et al., 2008). Furthermore, Jiraporn and DaDalt (2009) indicate that the existence of founding family members in a firm would reduce the pressure for managers to managed earnings because there would be less risk of the firm being taken over and the managers being replaced for underperformance in family-controlled firms.

On the other hand, proponents of agency theory suggest an inherent problem with family firms. According to Schulze et al. (2001), altruism in family firms could become a source of agency cost. If the manager of a firm is a family member, and their position is secure irrespective of their performance, then a family firm faces the risk of becoming less efficient than its non-family counterparts. Moreover, Bhaumik and Gregoriou (2010) suggest that family firms are more likely to expropriate minority shareholders.

Bertrand and Schoar (2006) try to summarize the different perspectives on family firms. According to them, some family firms exist with a long-term view of building a reputation and legacy, while others exist as a substitute for missing institutions and a weak legal system.

2.8 Conclusion

The objective of this chapter is to present an overview of the political system, legal environment, corporate governance, capital market, and ownership concentration in Indonesia. There have been major steps towards improving the corporate governance quality and investor protection system in recent years. These improvements include, among others, the adoption of international accounting standards (IFRS), the establishment of a corporate governance manual, which was created with the help of a reputable international body in the corporate governance sector (International Finance Corporation), and the implementation of new laws and regulations that give more power to investors, especially minority shareholders. However, the enforcement of the law and compliance with the code remain weak and present a challenge.

Regarding ownership structure, corporate ownership in Indonesia is similar to that found in most developing countries around the world. It is characterised by a high degree

on their behalf. If both the principal and the agent are trying to maximize their own utility, the likelihood of the agent diverting away from the principal interest to cater to their own interest increases.

of ownership concentration, and this concentration is relatively stable over time and across industries. The biggest player in the Indonesian capital market is families, followed by corporations (foreign and domestic) and the state. Institutional investors play a small and non-significant role as they hold only a tiny fraction of the shares in most listed firms.

Several potential drawbacks resulting from this pattern of ownership are the increased probability of the expropriation of firm resources by controlling shareholders to serve their own interests over those of minority shareholders. High level of ownership concentration might also discourage shareholders from investing in the listed firms. However, the data also indicate the probability of positive relationships between political connectedness and corporate governance quality. This opens up the possibility that political connections may emerge as a corporate governance tool in our study.

CHAPTER 3

RESEARCH METHODOLOGY

3 Research Methodology

3.1 Data collection and sample

The initial sample of this study consists of non-financial publicly listed firms in the Indonesian Stock Exchange over the period 2010-2015. Utility and financial firms are excluded because they have unique operating characteristics, different incentives, and the ability to manage reported earnings. They are also subject to different corporate governance. The sample is further restricted to firms with positive equities and complete financial data.

Financial data are collected from the Bloomberg database, with any missing data supplemented from the annual reports. Data regarding political connections, ownership identity and shareholding concentration as well as corporate governance data, such as external auditor, ultimate shareholders and board characteristics (board member age, education level and tenure), are hand-collected from the annual reports, IPO prospectus, tax amnesty filing, Capital IQ (Compustat) and other relevant and reliable sources (i.e. market screener, Yahoo finance, etc). Regional unemployment data and the distance from the firm's headquarters location to the capital city are collected from the Indonesian Central Bureau of Statistics (BPS). The final sample consists of 1,590 firm-year observations, corresponding to 265 unique firms. The procedures for selecting the sample are shown in Table 3.1.

Table 3-1. Sample distribution

Description	Firm	Firm years
IDX listed companies in 2010	413	2,478
Less		
financial firms*	68	408
firms with missing/incomplete data	61	366
firms with negative equities**	17	102
utility firms	2	12
Final sample	265	1,590

*Firms with JASICA code 8, which include Banks (81), Multifinance (82), Securities (83), Insurance (84) & others (89)

**Either in a single period or multiple periods between 2010-2015

The Indonesian Stock Exchange classifies the industry sector into 9 (nine) broad industry categories, named the Jakarta Stock Industrial Classification (JASICA) Index. The categories are 1) agriculture, which includes firms in the crops, plantations, animal husbandry, fisheries, forestry and other agricultural sectors; 2) mining, which includes firms in the coal mining, crude petroleum and natural gas production, metal and mineral

mining, land/stone quarrying and other mining-related sectors; 3) basic industry and chemicals, which includes firms in the cement, ceramics, glass, porcelain, metal and allied products, chemicals, plastics and packaging, animal feed, wood industries, and pulp and paper sectors; 4) miscellaneous industry, which includes firms in the machinery and heavy equipment, automotive and components, textile and garment, footwear, cable, and electronics sectors; 5) consumer goods industry, which includes firms in the food and beverage, tobacco manufacturers, pharmaceuticals, cosmetics and household, houseware and other consumer goods related sectors; 6) property, real estate and building construction, which includes firms in the property, real estate and building construction sectors; 7) infrastructure, utilities and transportation, which includes firms in the energy, toll road, airport, harbour and allied products, telecommunication, transportation, non-building construction sectors; 8) finance, which includes firms in the bank, financial institution, insurance, stock market securities, investment fund / mutual fund and other financial services sectors; and 9) trade, services and investment, which includes firms in the wholesale (durable and non-durable goods), retail trade, restaurant, hotel and tourism, advertising, printing and media, health care, and computer and computer services sectors. The number of firms for each industry category during 2010-2015 is shown in Table 2.2 and Table 3.8.

3.2 Political connections and corporate governance

To gain a better insight into the nature of political connections in Indonesia and its relationship with corporate governance quality, in this section we concentrate on the univariate analysis between political connectedness and various corporate governance characteristics in Indonesia.

There are many ways to define political connections from the literature. Fisman (2001) and Johnson and Mitton (2003) define political connectedness as a situation when a business is owned by people with close connections to political power and the value of the firm is affected by these connections. Meanwhile, Faccio (2006) identify a firm as a politically connected firms if at least one of its large shareholders (shareholders with at least 10% of voting shares), or one of its board members is a current/former member of parliament, current/former ministers or having a close relationship to top politicians or political party.

This study follows Faccio (2006) definition to identify politically connected firms. Firms are categorised as politically connected (PC) if at least one large shareholder (controlling at least 10% of the votes directly or indirectly) or its board member

(BOC/BOD) is a current/former Member of Parliament, a current/former minister, current/former high-ranking government officials, current/former military/police generals, or having a close relationship to top politicians or political party.

We include the appointment of ex-military and police generals as politically connected board members since these generals have vast access to government network and resources, as well as an important role in business society (McCulloch, 2003). In the current cabinet, there are six out of thirty-four ministers (18%) which was ex-military/police generals. Previous studies also acknowledge the role of ex-military/police general as connected board members in the Indonesian setting (Habib et al., 2017b; Habib et al., 2017a).

Table 3.2 shows the average corporate governance index score of politically connected and non-politically connected firms. Table 3.3 shows the average percentage of the appointment of big four public accounting firms among politically connected and non-politically connected firms, while Table 3.4 shows the average disclosures index score of politically connected and non-politically connected firms.

The univariate analysis from Table 3.2 to Table 3.4 are all similar, and it seems to suggest the possibility of better corporate governance quality for politically connected firms. On average, politically connected firms have higher corporate governance index score, are more likely to appoint big four public accounting firms as their external auditors and have a higher level of disclosure.

Moreover, Table 3.2 and Table 3.4 also show that both the corporate governance index scores and disclosure index scores among listed firms in Indonesia have gradually increased over the sampling period, indicating an overall improvement of corporate governance quality for Indonesian firms.

3.3 Dealing with Endogeneity

A firm's decision to be politically connected is not random, and unobservable factors that affect this decision may also be associated with firm-level firms' internal conflicts of interest, earnings management activities and investment inefficiency. Previous studies suggest that endogeneity problem exist in the relationship between political connections and firm performance (Du and Girma,2010; Boubakri et al., 2012; Wu et al., 2012), financial distress (He et al., 2019), cost of capital (Boubakri et al., 2012; Houston et al., 2014) and related parties transaction (Habib et al., 2017).

Table 3-2. Political connections and corporate governance index by sector

No	Industry Sector	2010		2011		2012		2013		2014		2015		All year	
		PC	NON	PC	NON	PC	NON	PC	NON	PC	NON	PC	NON	PC	NON
1	Agriculture	45.61	39.58	45.08	43.45	51.04	45.60	56.25	44.75	56.68	45.40	58.54	48.08	52.76	44.24
2	Mining	52.05	41.62	55.52	44.77	58.35	48.66	60.10	50.66	61.10	52.60	61.70	54.02	58.21	48.90
3	Basic Industry & Chemicals	47.31	36.17	48.67	36.62	52.71	39.78	54.29	40.96	56.19	43.31	57.77	44.89	52.86	40.27
4	Miscellaneous Industry	40.41	38.27	40.55	39.30	44.37	42.94	48.56	45.33	50.49	45.99	52.01	48.68	46.07	43.42
5	Consumer goods Industry	45.12	36.04	48.22	38.32	50.91	42.17	52.32	42.66	54.28	43.32	58.22	44.41	51.94	40.96
6	Property, Real Estate & Construction	41.08	35.25	42.95	36.43	44.10	37.37	47.29	40.56	48.66	43.06	52.03	43.14	46.03	39.26
7	Infrastructure & Transportation	45.34	39.22	46.66	41.82	48.60	46.15	51.83	51.76	55.05	55.30	57.49	54.64	50.71	48.53
9	Trade & Services	39.57	35.84	41.22	36.51	43.92	39.15	46.05	40.55	47.17	41.81	49.81	43.52	44.69	39.46
	Average	43.42	36.81	45.16	38.15	47.78	41.27	50.44	42.92	52.07	44.52	54.49	45.97	48.97	41.54

This table shows the average corporate governance index scores of politically and non-politically connected firms classified by industry sector over the period of 2010-2015.

Table 3-3. Political connections and audit quality by sector

No	Industry Sector	2010		2011		2012		2013		2014		2015		All year	
		PC	NON	PC	NON	PC	NON	PC	NON	PC	NON	PC	NON	PC	NON
1	Agriculture	20.00	37.50	16.67	42.86	16.67	42.86	42.86	33.33	42.86	33.33	42.86	33.33	31.58	37.50
2	Mining	64.29	42.86	64.29	37.50	64.29	33.33	64.29	33.33	66.67	25.00	66.67	25.00	65.12	32.65
3	Basic Industry & Chemicals	66.67	19.35	66.67	19.35	66.67	19.35	66.67	19.35	68.75	16.67	73.33	16.13	68.13	18.38
4	Miscellaneous Industry	66.67	42.86	66.67	42.86	66.67	42.86	66.67	50.00	66.67	50.00	66.67	50.00	66.67	46.43
5	Consumer goods Industry	55.56	47.06	55.56	47.06	50.00	50.00	54.55	46.67	54.55	46.67	58.33	42.86	54.84	46.81
6	Property, Real Estate & Construction	26.67	21.43	23.33	14.29	22.58	15.38	22.58	15.38	22.58	15.38	23.33	14.29	23.50	16.05
7	Infrastructure & Transportation	35.71	50.00	42.86	50.00	46.15	57.14	46.15	57.14	53.85	42.86	53.85	42.86	46.25	50.00
9	Trade & Services	42.86	29.73	42.86	36.11	41.67	38.24	47.22	38.24	47.22	38.24	45.95	42.42	44.65	37.02
	Average	45.04	32.09	44.70	33.08	44.03	34.35	47.06	34.11	48.55	32.28	49.28	32.28	46.48	33.03

This table shows the percentage of politically and non-politically connected firms which appoint big four public accounting firms classified by industry sector over the period of 2010-2015.

Table 3-4. Political connections and disclosures index by sector

No	Industry Sector	2010		2011		2012		2013		2014		2015		All year	
		PC	NON	PC	NON	PC	NON	PC	NON	PC	NON	PC	NON	PC	NON
1	Agriculture	27.37	24.47	31.40	30.53	40.18	35.79	46.92	36.67	51.13	38.42	55.94	42.28	43.27	34.11
2	Mining	41.35	20.90	46.77	24.47	50.53	35.91	53.98	40.82	56.63	44.87	61.05	48.42	51.88	36.31
3	Basic Industry & Chemicals	32.56	20.71	35.86	21.73	41.89	27.54	47.30	30.49	51.64	34.74	56.70	37.76	44.41	28.80
4	Miscellaneous Industry	26.08	20.75	27.25	23.16	31.81	28.27	36.14	34.44	41.29	35.86	48.30	38.80	35.15	30.21
5	Consumer goods Industry	30.41	20.06	34.39	23.65	39.05	30.79	41.34	34.46	47.66	36.07	55.35	36.69	42.21	29.87
6	Property, Real Estate & Construction	27.37	21.20	31.12	24.21	33.79	27.53	40.03	33.77	43.80	38.87	51.79	40.30	38.00	30.89
7	Infrastructure & Transportation	32.56	22.28	34.81	25.79	39.19	32.03	45.67	41.20	51.98	48.57	56.19	53.83	43.16	37.95
9	Trade & Services	23.76	18.75	27.91	20.44	33.45	25.20	37.69	28.36	41.46	31.58	47.20	34.77	35.39	26.31
	Average	29.17	20.45	32.83	22.85	37.42	28.66	42.39	32.74	46.78	36.17	52.81	39.03	40.39	29.84

This table shows the average disclosure index scores of politically and non-politically connected firms classified by industry sector over the period of 2010-2015.

Therefore, endogeneity between political connections and internal conflicts (principal-principal and agent-principal), earnings management and investment inefficiency potentially exist in our study. To test the endogeneity of political connectedness and the relevance and validity of the instrument variables, we conduct three separate tests, namely the Durbin-Wu Hausman test (Durbin, 1954; Wu, 1973; Hausman, 1978) for endogeneity, the F-test (Cragg and Donald, 1993) for instrument variables relevance and the J-test of overidentifying restrictions (Hansen, 1982) for instrument variables validity for each chapter.

The first step is to test whether endogeneity problem exist between political connections and the dependent variables of the study (principal-principal and principal-agent conflict, real and discretionary accruals, and investment inefficiency). Regression using Heckman treatment effect will be required to deal with the endogeneity problem while ordinary least square regression (OLS) will be sufficient if the DWH test results found no evidence of endogeneity.

One approach that is commonly used to address the endogeneity problem is using instrumental variables in the first step regression of the treatment effects. In general, an instrumental variable(s) should have two basic properties: first, it should be correlated with the included endogenous explanatory variables for which it is supposed to serve as an instrument (strong/relevant instrument); second, it should be independent of (uncorrelated with) the disturbance term in the equation of interest (valid/exogenous instrument) (Wooldridge, 2010, pp.82-85). Using weak instrument(s) lead to inconsistent results while using an endogenous instrument(s) lead to bias results (Bound et al., 1995). Thus, the treatment effects model requires a suitable instrument(s) that can explain a firm's decision to get connected but is not directly related to firm-level firms' internal conflicts of interest.

In the beginning, three instruments that were used in previous studies on political connections are tested, namely the percentage of connected firms inside an industry (Guedhami et al., 2014; Kim and Zhang, 2016; Habib et al., 2017b), the distance of the firm headquarters from the capital city (Kim and Zhang, 2016; Habib et al., 2017a; Habib et al., 2017b) and the local/regional unemployment rate (Xu et al., 2013).

The presumption for the percentage of connected firms is that a firm industry's type may influence the need to have political connections. Large firms, firms in heavily regulated industries, and firms in industries that have a strong relationship with government planning (such as infrastructure-related firms) are more likely to have political connections than firms in other industries (Agrawal and Knoeber, 2001). The

presumption behind the distance of the firm headquarters is that the company's geographic location affects the company's ability to attract politically connected board members (Guedhami et al., 2014; Houston et al., 2014).

According to Houston et al. (2014), politicians (including retired politicians) might prefer working in the city where they built up their major social and political networks. In an opportunistic behavioural view setting, the politicians would use connected firms to help them achieve political goals, such as the reduction of the regional unemployment rate (Chen et al., 2011a; Wu et al., 2012a; Wu et al., 2012b). On the other hand, in an accountable behaviour setting, the politicians would also use connected firms to relay their constituents' aspirations and needs, which may also result in setting up more employment opportunities for local areas (Niessen and Ruenzi, 2010).

Similar to prior studies' suggestions, we have no a priori reason to believe that these three instruments have a direct impact on principal-principal or agent-principal conflict as well as real and discretionary accruals earnings management activities through channels other than political connections.

However, for the investment inefficiency chapter, several studies suggest that the unemployment rate (Jimenez et al., 2011; Saeed et al., 2017) and the location of a firm (Almazan et al., 2010; Gao et al., 2011) influence firms' investment decisions , making both instruments not a proper instrument to use for this chapter's dependent variable, investment inefficiency.

There have been several instruments used in previous political connections studies that do not directly relate to firm level-investment, officials' age and education level (An et al., 2016; Xu et al., 2016). The experience and knowledge of the officials, which relate to the age and education level, affect the possibility of appointment of politically connected board members, but are not related to firm-level investment inefficiency (An et al., 2016; Xu et al., 2016)

Since all of the political connections in our samples are in the board of commissioners, we use the average age (BOCAGE) and education level (BOCEDUC) of the members of boards of commissioners as the instrumental variables for this chapter, along with the percentage of connected firms inside an industry (Guedhami et al., 2014; Kim and Zhang, 2016).

Table 3-5. Durbin-Wu-Hausman tests for endogeneity

Conflicts of Interest		
	OREC	QFCF
F (1, 264)	5.63**	3.41*
Earnings Management		
	REM	AEM
F (1, 264)	16.08**	4.74**
Investment Inefficiency		
	INEFF	
F (1, 264)	15.23***	

This table reports the Durbin-Wu Hausman (DWH) endogeneity test, Significant results of DWH tests indicate the existence of endogeneity. OREC is the measure for principal-principal conflict, QFCF is the measure for principal-principal conflict, REM is the measure for real earnings management activities, AEM is the measure for discretionary accrual earnings management activities and INEFF is the measure for investment inefficiency. *, **, and *** indicate the statistical significance at 10%, 5% and 1% levels, respectively.

The Durbin-Wu Hausman test results in Table 3.5 indicate that there is an endogeneity problem between political connections and all of the dependent variables measure. Because of that, the main result of this study should be derived from the second-stage regression of the Heckman two-step treatment effects procedure since the simple ordinary least square (OLS) regression results would not be consistent in the presence of the endogeneity problem (Lennox et al., 2011).

The second step before we run the Heckman treatment effect regression is to test the relevance and exogeneity of the instruments used in the regression using Cragg and Donald (Cragg and Donald, 1993) F-test for instrument variables relevance and Hansen (192) J-test of overidentifying restrictions for instrument variables validity.

Table 3-6. Cragg-Donald F-test of instruments relevance

Conflicts of Interest			
	OREC		QFCF
F (2,1587)	63.42***	F (2,1587)	63.42***
Earnings Management			
	REM		AEM
F (2,1571)	65.79***	F (2,1577)	64.99***
Investment Inefficiency			
	INEFF		
F (3,1585)	59.43***		

This table reports the Cragg-Donald F test of instrument relevance. Significant F-test results with F-value score above 10 (Staiger and Stock, 1997) or above the Stock-Yogo (2005) critical value (6.46) indicate that the instrumental variables used in the regression are relevant (strong). OREC is the measure for principal-principal conflict, QFCF is the measure for principal-principal conflict, REM is the measure for real earnings management activities, AEM is the measure for discretionary accrual earnings management activities and INEFF is the measure for investment inefficiency. *, **, and *** indicate the statistical significance at 10%, 5% and 1% levels, respectively.

Table 3-7. Hansen J-test of instruments exogeneity

Conflicts of Interest		
	OREC	QFCF
J	1.30	0.01
Earnings Management		
	REM	AEM
J	0.62	0.95
Investment Inefficiency		
	INEFF	
J	3.11	

This table reports the Hansen J-test of instrument validity. Non-significant results of J-test indicate exogeneity of the instrumental variables used in the regressions. OREC is the measure for principal-principal conflict, QFCF is the measure for principal-principal conflict, REM is the measure for real earnings management activities, AEM is the measure for discretionary accrual earnings management activities and INEFF is the measure for investment inefficiency. *, **, and *** indicate the statistical significance at 10%, 5% and 1% levels, respectively.

Similar to prior studies' suggestions, we have no a priori reason to believe that these three instruments have a direct impact on the dependent variables for each empirical chapter (conflicts, earnings management, and investment inefficiency), through channels other than political connections. However, after running the tests, the firm headquarters' distance from the capital city (*HQ_DIST*) failed to pass the exogeneity requirements for the principal-principal, principal-agent and real earnings management measures.[10] After the removal of HQ_DIST as instruments, all of the instruments now satisfy the relevance and exogeneity requirements. The results for relevance and exogeneity of the instruments are shown in Table 3.6 and 3.7.

Moreover, we also use the lagged value of both earnings management proxies in the first stage to control for the potential effect of reversal on discretionary accruals earnings management (Chi and Gupta, 2009; Wu et al., 2012a) and real earnings management (Vorst, 2016) activities. Using lagged dependent variables in other chapters (principal-principal, principal-agent, and investment inefficiency) do not qualitatively change the regression results but reduce the numbers of available samples by 10-20%.

All regression includes industry and year dummies to allow the time and industry variations that affect the dependent variables cross-sectionally but do not vary during the sample period; however, for brevity the results are not reported in the table. The *p*-values in the panel regressions are based on the robust standard errors to control for heteroscedasticity and cluster at firm level to address the issue that the observations are not independent, and the errors are potentially serially correlated (Petersen, 2009).

Table 3-8. Firm samples per industry per year

	JASICA Industry Sector								
Year	1	2	3	4	5	6	7	9	TOTAL
2010	13	21	46	23	26	44	20	72	265

[10] The results which include the failed instrument are shown in Appendix 2.

2011	13	22	46	23	26	44	20	71	265
2012	13	23	46	23	26	44	20	70	265
2013	13	23	46	23	26	44	20	70	265
2014	13	23	46	23	26	44	20	70	265
2015	13	23	46	23	26	44	20	70	265
TOTAL	78	135	276	138	156	264	120	423	1590

Notes: There are only two firms that changes their industry sectors during the sampling period, MYOH (from 9 to 2 in 2011) and PSAB (from 9 to 2 in 2012).

Throughout the study, all significance levels are two-tailed. Previous studies suggested a minimum amount of 10 observations for each industry-year to maintain the validity of the results (Chi et al., 2016; Choi et al., 2018). The minimum amount of observation per industry-year in our sample is 13, as shown in Table 3.8. We only use the observations that have all the necessary data to calculate the variables used in this study.

3.4 Regression model, software, and justification

Throughout the whole chapters of this study, the regression model use for each chapter is the same. The choice of using treatment effects with first stage probit regression and maximum likelihood with robust standard errors, firms clustered and industry and year fixed effects for the second step is because we believe that this is the best method available for the characteristic of the study.

The main independent variable: PC is a dummy variable with a binary value of 0 and 1. Hence the use of probit regression instead of OLS for the first stage regression would be more suitable (Brooks, 2019). Moreover, since the main independent variable for the three empirical chapters is the same, PC, we use the same regression model throughout to ensure consistency and the interpretation of the regression results. Furthermore, because probit is used in the first stage, maximum likelihood is the ideal model for the second stage regression (Cappellari and Jenkins, 2003; Chiburis and Lokshin, 2007; Sajaia, 2008).

We also need to run the regression on a method that allowed different sets of covariates for the first and second stage regression to see the impact of other control variables besides the instrumental variables, as well as allowing robust standard errors to control for heteroskedasticity and cluster at firm level to address the issue that the observations are not independent, and the errors are potentially serially correlated. The best program available in STATA that would fit all of this study requirements during the data analysis period of this study is the '***etregress***' command (Brave and Walstrum, 2014).

Besides the main regression, for each chapter we also conducted subsamples regression for separated hypothesis in each chapter. The reason for using subsample

regression instead of interaction between the political connections (PC) variable with other control variables (e.g. corporate governance quality / CG) is because in this study, we would like to study "the effect of PC for firms with a high level of CG and the effect of PC for firms with a low level of CG " (as we would get with separate subsamples regressions) rather than "the effect of high CG and how much this effect is different for low CG " (as what we would get from the interaction effects) (Gebhardt et al., 2005).

CHAPTER 4

THE RELATIONSHIP BETWEEN POLITICAL CONNECTIONS AND FIRMS' INTERNAL CONFLICTS OF INTERESTS

4 The relationship between political connections and firms' internal conflicts of interest

4.1 Introduction

Emirsyah Satar was regarded as a successful executive of Garuda Indonesia Airways, the Indonesian flagship carrier, during his stint as the CEO of the firm during 2005-2014. Mr Satar received numerous awards, both nationally (Most Admired CEO 2009-2014, Transformative SOE Personnel Award 2016) and internationally (CNBC Travel Business Leader of the Year 2013). However, these accomplishments were washed away when Mr Satar was probed as a suspect in a graft case in 2017, and he was subsequently arrested in August 2019. Mr Satar was alleged to have received money amounting to 1.2 million euros and 180 thousand USD as well as 2 million USD worth of goods to benefit a certain firm, namely Rolls-Royce, in the procurement of Rolls-Royce aircraft engine parts and maintenance service during his stint as Garuda's CEO (Soeriaatmadja, 2019). Garuda Indonesia later sued Rolls-Royce for alleged fraud regarding this agreement (News Desk, 2018; Tani, 2018). Mr Satar's case is an example of managerial expropriation activities that go against the interests of a firm's other stakeholders.

Mochtar Riady's Lippo Group is one of the wealthiest conglomerate groups in Indonesia, with a net worth of around 2.3 billion USD in 2019, according to Forbes. In August 2018, it faced a bankruptcy lawsuit against Internux, a subsidiary firm of First Media (KBLV), in Indonesian court of law (Septiadi, 2018). The interesting and suspicious part of this lawsuit is that the two companies that brought this lawsuit were, until December 2017, a year prior to the lawsuit, controlled by one of Riady's family members. This carefully managed insolvency process could actually benefit Internux and excludes Raiffeisen Bank International, an Austrian foreign lender, from recovering its debt from Internux (Weinland, 2019). The Internux case is an example of major shareholders' expropriation activities that go against the interests of a firm's other stakeholders.

There are two potential conflicts of interest inside a firm: between major/controlling shareholders and minority shareholders (Young et al., 2008; Renders and Gaeremynck, 2012; Li and Qian, 2013) and between managers and shareholders (Chen and Steiner, 1999; Ang et al., 2000; Singh and Davidson III, 2003). Having political connectedness can either exacerbate or mitigate these conflicts.

While there has been a considerable amount of literature published on the topic of political connections, there is limited research on the role of political connections on firms' internal conflicts of interest. The results from the literature regarding the relationship between political connections and the controlling vs minority shareholders conflict so far only provides evidence which supports the notion that politically connected firms exacerbate the conflict between controlling and minority shareholders, especially in a country with a weak investor protection system and the presence of large controlling shareholders (Jiang et al., 2010; Chan et al., 2015; Khan et al., 2016; Sun et al., 2016).

Two important questions remain unaddressed by prior studies. First, is it possible for political connectedness to reduce the conflict between controlling and minority shareholders in a country with the presence of large controlling shareholders and a weak investor protection system? Second, what is the role of political connectedness in the conflict between managers and shareholders in this setting? To address those questions, we investigate whether political connections can be used as a governance device that mitigates firms' internal conflicts of interest (principal-principal and agent-principal conflicts) in Indonesia, a country with a high level of ownership concentration and a weak investor protection system.

Political connectedness is thought to be valuable for firms. Political connections can be a powerful tool to gain lucrative government contracts (Dieleman and Sachs, 2008; Li et al., 2018), provide easier access to finance with relatively low interest rates from state-owned banks (Khwaja and Mian, 2005; Charumilind et al., 2006), and influence government policy that would be beneficial for the connected firms (Agrawal and Knoeber, 2001; Chen et al., 2008). As a result, political connections increase firm performance (Goldman et al., 2009; Niessen and Ruenzi, 2010), lower perceived risk for creditors and investors (Boubakri et al., 2012b; Boubakri et al., 2013), and increase the likelihood of survival for start-up firms (Jun and Girma, 2010).

However, political connectedness can also be costly for the firm. If not managed properly, easy access to lending can cause a high leverage level and result in financial difficulties (Bliss and Gul, 2012b). Access to government contracts and beneficial policies may lead to earnings management activities, which camouflage the real fundamental performance of the firm (Chen et al., 2008). Furthermore, the existence of political connections can also make the firm less efficient than non-connected firms, spending a considerable amount of firm resources on maintaining the connections (Fan et al., 2007). Having political connections can also make the management of the firm become complacent and struggle to survive when the political regime changes and the

existing political connections can no longer be relied upon (Fisman, 2001; Leuz and Oberholzer-Gee, 2006).

These mixed results are also related to the nature of the political connections. Political connections can become a tool for politicians' and business owners' rent-seeking activities (Krueger, 1974), which will bring benefit only to politically connected firms and the connected politicians but will have a negative effect on other aspects outside the firms, such as the economic development of the country (Morck et al., 2005). However, political connections can also become a tool for politicians and business owners to signal their commitment to accountable activities (Djankov et al., 2010), which will bring benefits not only for politically connected firms and politicians but also for the politicians' constituents (Niessen and Ruenzi, 2010) and the economic development of the country (Claessens, 2006).

In this study, we expect that political connections mitigate the conflict between controlling and minority shareholders, even in the face of large controlling shareholders and a weak investor protection system. Previous studies suggest that there are several instruments that can be used to reduce the expropriation of minority interests by large/controlling shareholders, such as the improvement of investor protection regulations (La Porta et al., 2002; Berkman et al., 2010) and the improvement of corporate governance quality (Douma, 1997; Jungmann, 2006; Adams and Ferreira, 2007; Belot et al., 2014; Bezemer et al., 2014).

However, in many instances, the steps taken by regulators to improve investor protection and corporate governance quality failed to provide the expected impact and work only imperfectly, even though the implementation process for these improvements consumes considerable costs (Claessens, 2006), which may hinder regulators in other countries from improving their investor protection systems and corporate governance quality (La Porta et al., 2000; Claessens, 2006).

Indonesia's setting is appropriate to examine the impact of political connections on reducing the conflict within the firm for several reasons. First, the political reform movement in Indonesia inadvertently removed the two main barriers to the sufficient and effective improvement of the investor protection system and corporate governance quality as well as the resistance of powerful politicians and their business partners, which stand to lose the benefits they receive from the status quo setting (La Porta et al., 2000; Morck et al., 2005; Claessens, 2006; Claessens and Yurtoglu, 2013).

This situation is dissimilar to many Asian developing countries, such as China (Jiang et al., 2010; Chan et al., 2015; Sun et al., 2016), Thailand (Bunkanwanicha and

Wiwattanakantang, 2009; Polsiri and Jiraporn, 2012) and Malaysia (Gul, 2006; Bliss and Gul, 2012a), where the two major obstacles for sufficient and adequate investor protection and corporate governance reform are that the incumbent holders of political power and their cronies have maintained the same influence before and after the reform process.

Furthermore, post-reform Indonesia is still regarded as a country with weak legal enforcement and a weak investor protection system (Leuz and Oberholzer-Gee, 2006; Enomoto et al., 2015) and with a strong presence of large/controlling shareholders (Carney and Child, 2013; Carney and Hamilton-Hart, 2015). These environmental settings mean that Indonesia still faces the problem of the potential expropriation of minority interests by controlling shareholders (Claessens and Fan, 2002; Bona-Sanchez et al., 2014).

Second, while this reform process does not really diminish the existence of large controlling shareholders or vastly improve the investor protection system to become as strong as those in developed countries, the effect might be enough to change the role of a particular element, namely political connectedness. Political connectedness in Indonesia has changed dramatically from being centrist with single powerful connections (Fisman, 2001) to comprising various dispersed and less powerful connections (Habib et al., 2017a).

Moreover, the post-reform regulations also limit the potential of politically connected firms to influence government regulations that favour them (Indrawati, 2002; McRae, 2013). Will the changing nature of political connectedness influence the controlling shareholders' decision-making? What is the objective in appointing politically connected board members in the new setting? Are there still any benefits to having political connections?

Third, there is the corporate governance regulation. The regulators in Indonesia chose the implementation of a two-tier board system to acknowledge the problem of concentrated ownership as well as the scarce separation of ownership and control. According to Jungmann (2006), the core idea behind the development of the two-tier model is the separation of duties between controlling bodies and managing bodies to protect the shareholders' interest and the public interest.

Previous studies also suggest that minority shareholders in countries with a weak investor protection system and the presence of large controlling shareholders resort to the implementation of good corporate governance to protect their interests (Klapper and Love, 2004; Renders and Gaeremynck, 2012). These regulations create a market for skilled and knowledgeable personnel outside the firms that can help the firm in implementing the

measures and mechanisms required by the corporate governance regulations, which includes politicians (Dahya et al., 2008; González-Bailon et al., 2013).

Fourth, according to Durnev and Kim (2005), the controlling shareholders might be willing to restrain themselves from expropriation activities and implement better corporate governance mechanisms when they have a need for external financing to grow their business. Politically connected Indonesian firms are no longer able to get preferential treatment from state-owned banks (Leuz and Oberholzer-Gee, 2006) or their own banks[11] for funding (Pangestu, 2003) and would thus need investors to finance investment opportunities.

Appointing independent politically connected board members with a sound reputation and considerable knowledge becomes one of the signals for controlling shareholders of their commitment to honour minority shareholders' interests (González-Bailon et al., 2013; Bona-Sanchez et al., 2014). Meanwhile, the appointment as a board member in listed firms brings significant benefits in terms of social status and financial reward for the politicians (Niessen and Ruenzi, 2010; González-Bailon et al., 2013).

In this study, we expect that the combination of a clean-slate implementation of corporate governance regulations, the changing nature of the political connections, and the behaviour of the controlling shareholders will reduce the conflict between controlling and minority shareholders (principal-principal conflict), indicating the role of political connections in mitigating this conflict. In addition to the role of reducing the conflict between controlling and minority shareholders, this study also investigates the role that political connections play in mitigating the conflict between manager and shareholders (agent-principal conflict) in a country with a weak investor protection system and high ownership concentration.

Previous studies suggest that there are three possibilities for how managers conduct themselves in the presence of large controlling shareholders and a weak investor protection system: managers align themselves with the controlling shareholders' interests (Kim et al., 2008; Young et al., 2008); managers refrain from entrenchment activities (Kim et al., 2008); or managers maximise their own wealth (Lei et al., 2013). Managers' behaviour in the presence of a weak investor protection system and large controlling shareholders depends on several factors, such as the identity of the controlling

[11] The deregulation of the banking sector in October 1988 in Indonesia has made it easier for business groups to have their own bank, with only 10 billion rupiahs (± 5 million USD) required to set up a new bank. The public funds acquired from these banks are then given as credit loans to affiliated firms (Indrawati, 2002; Pangestu, 2003).

shareholders (Claessens and Fan, 2002; Kim et al., 2008; Lei et al., 2013) and corporate governance quality (Gompers et al., 2003; Dey, 2008; Young et al., 2008).

Fama and Jensen (1983) and Dahya et al. (2008) suggest that the separation of management and control, like in the two-tier board system, would lead to a situation where independent board members have the incentive to restrict managers' tendency of expropriating firm resources. These incentives are stronger if the independent board members are facing human capital losses, such as a loss of reputation and a perceived lack of skills or knowledge by the public if they fail to do their duty effectively.

Independent board members comprise a key factor that can effectively restrain managers from entrenchment activities through effective monitoring and supervising by the board of commissioners (BOC), which is the non-executive board in the two-tier system (Jungmann, 2006; Bezemer et al., 2014). As a result, we expect that the appointed politically connected board members, who are usually appointed as independent board members, play an essential role in reducing the potential conflict between managers and shareholders by effectively monitoring and supervising management activities.

To investigate the relationship between political connections and the potential conflict between majority and minority shareholders (principal-principal conflict), this study uses the other receivables ratio, as used in prior studies (Liu and Lu, 2007; Jiang et al., 2010; Wang and Xiao, 2011; Guariglia and Yang, 2016; He and Luo, 2018), as a measure.

Meanwhile, to investigate the relationship between political connections and the potential conflict between managers and shareholders (agent-principal conflict), this study uses the interaction of growth opportunity with the free cash flow ratio developed by Doukas et al. (2000), which has been used by other studies to measure the agent-principal conflict in the presence of large controlling shareholders (Belghitar and Clark, 2015; Chang et al., 2016).

Using a large dataset from Indonesia over the 2010-2015 period, the results show a strong, significant and negative relationship between all measures of political connections and the principal-principal conflict, as well as the measure for agent-principal conflict, which supports our hypothesis on the role of political connections in mitigating potential conflicts of interest within the firm.

This study conducts several additional tests to extend the results and their robustness. First, this study tests the relationship between corporate governance quality and potential conflicts of interest inside the firm. Further decomposition of the firm samples into two categories, namely higher corporate governance quality and lower

corporate governance quality, shows that political connections and corporate governance quality have a complementary and not substitutionary function. Political connectedness is only effective in mitigating conflicts of interest inside the firm in firms with high corporate governance quality.

Second, this study tests the relationship between information asymmetry and firms' internal conflicts of interest. The regression results after decomposing the samples into firms with high and low information asymmetry suggest that political connectedness is more effective at mitigating the conflicts in firms with a high level of information asymmetry.

The results of this study contribute to the literature on political connections and firms' internal conflicts of interest in several ways. First, this is the first study to provide evidence that political connections can reduce a firm's internal conflicts of interest, whether it be principal-principal conflict or agent-principal conflict.

Previous studies suggest that political connections increase a firm's internal conflicts of interest, whether between controlling and minority shareholders (Sun et al., 2016) or between managers and shareholders (Khan et al., 2016). Thus, this study provides evidence that extends the literature and enhances our understanding of the new role of political connectedness.

Second, this study shows a complementary relationship between political connections and corporate governance quality regarding firms' internal conflicts of interest. This result also contrasts with previous studies suggesting that political connections play a substitute role for corporate governance quality (Leuz and Oberholzer-Gee, 2006; Boubakri et al., 2012a; Yeh et al., 2013).

The rest of this chapter is organised as follows. Section 4.2 discusses a brief background of Indonesia's institutional setting, while Section 4.3 provides the literature review and hypothesis development. Section 4.4 presents the measurement of the dependent variable and empirical models. Section 4.5 reports the univariate analysis, regression results and analyses. The various decomposition tests and robustness checks that are conducted are summarised in Section 4.6. Finally, Section 4.7 concludes the study.

4.2 Background

The Indonesian equity market was once rife with extreme firm-internal conflicts of interest for minority shareholders as a result of a combination of crony capitalism, weak corporate governance and government interference (Claessens and Fan, 2002; Boediono, 2005). It was not until the Asian financial crisis of 1997 and its subsequent effect on

Indonesia's political and economic systems that Indonesia's government started to pay more serious attention to financial institution reform and good corporate governance implementation (Indrawati, 2002; Pangestu, 2003).

Several of these significant changes in the institutional setting, such as a democratic political system, financial institution reform, freedom of the press and the improvement of good corporate governance implementation, which relates to the improvement in law enforcement in general and the investor protection system specifically, are relevant to the discussion of firms' internal conflicts of interest, either between major controlling shareholders and minority shareholders, or between managers and shareholders in general.

There are two contrasting situations in Indonesia's current institutional setting that could contribute to more insight and understanding in the literature on the relationship between political connections and firms' internal conflicts of interest. On the one hand, the descriptive analysis in Chapter 3 section 3.2 suggests that the significant changes in the political system, that is, the changes in the nature of political connectedness from powerful incumbent politicians to the not-so-powerful former politicians, and the financial institution reform may have contributed to the fact that, on average, politically connected firms in Indonesian capital market have a higher level of disclosure, are more likely to appoint high-quality external auditors, and have better corporate governance quality.

On the other hand, the descriptive analysis in Chapter 2 section 2.7 suggests that the power of controlling shareholders in the Indonesian capital market is likely to be higher than in other countries since the average shareholding by the largest shareholders in Indonesian listed firms is higher than those in other countries. The literature suggests that a higher level of ownership in fewer major shareholders could lead to a higher level of minority interest expropriation (Claessens et al., 2000a; Villalonga and Amit, 2006; Jiang et al., 2010; Su et al., 2014) and managers alignment with the controlling shareholders' interests (Kim et al., 2008; Young et al., 2008).

There are still two possible outcomes of these contradictions. The first scenario sees political connectedness become an effective tool of corporate governance that subdues major shareholders and managers tendency for expropriation. The second scenario sees major shareholders' and managers' power and influence remaining stronger than the impact of the institutional setting improvement, and thus political connectedness becomes ineffective at mitigating the conflicts of interest and might even exacerbate them to some extent.

4.3 Literature review and hypothesis development

4.3.1 Political connections and firms' internal conflicts of interest

A considerable amount of literature has been published on political connections. There are mixed results from previous studies regarding the usefulness of political connections. Several studies suggest that having political connections is beneficial for firms (Agrawal and Knoeber, 2001; Khwaja and Mian, 2005; Charumilind et al., 2006; Dieleman and Sachs, 2008), while others suggest that having political connections actually has detrimental effects on firms (Fisman, 2001; Leuz and Oberholzer-Gee, 2006; Fan et al., 2007; Chen et al., 2008; Bliss and Gul, 2012b). Previous studies also suggest that the impact of having political connections is more pronounced in countries with a weak investor protection system and a high level of corruption (Faccio, 2010; Boubakri et al., 2012).

One major reason for the mixed results regarding the value of political connections is the environmental setting of a country. In countries with a strong investor protection system, government and public officials are under more stringent public scrutiny due to the higher requirement for disclosure, which increases government quality and reduces the corruption level (Djankov et al., 2010). Political integrity is created as a result of trust between voters and politicians, which results in the absence of agency problems between government officials and their constituents (Butler et al., 2009).

A coalition between politicians and business firms results in positive results not only for business owners and politicians but also for the citizens of the country. Business owners appoint responsible and skilful politicians as members of their firm boards to enhance their performance (Niessen and Ruenzi, 2010; Amore and Bennedsen, 2013; González-Bailon et al., 2013), while politicians use their board membership position not only to enhance their reputation (Niessen and Ruenzi, 2010; González-Bailon et al., 2013) but also to assert their constituent aspirations to the firms (Niessen and Ruenzi, 2010).

On the other hand, in countries with a weak investor protection system, the government has a strong influence in determining resources, such as tax breaks, bank loans and government subsidies (Krueger, 1974; Khwaja and Mian, 2005; Wu et al., 2012b). Thus, business owners cannot fully depend on market institutions and seek the help of politicians for access (Rajan and Zingales, 1998; Choi et al., 1999).

Both business owners and politicians want to protect their interests and make sure that the privilege is enjoyed only by the people in their circle (Morck and Yeung, 2004). As a result, the coalition between politicians and business firms also results in another

phenomenon, namely the concentration of large economic resources in the hands of only a few dominant firms, in the form of a family business (Morck and Yeung, 2004; Morck et al., 2005) or a state-owned enterprise (Borisova and Megginson, 2011). A weak investor protection system, heavy government intervention and concentration of resources in the hands of a small circle of elite politicians and business owners can have a detrimental effect on the rest of the country, such as stunted economic growth (Morck et al., 2005).

In many developing countries, the substantial control of economic resources is also reflected in the capital market through the high level of ownership concentration by a handful of firms (Claessens et al., 2000a; Andres, 2008; Dahya et al., 2008; Jiang et al., 2010). The presence of large, dominant, controlling shareholders in the capital market creates a problem, which arises from goal incongruence between controlling and minority shareholders, better known as the principal-principal conflict (Dharwadkar et al., 2000). In the presence of a weak investor protection system, controlling shareholders can expropriate firm resources for their benefit without facing serious repercussions for these activities (Young et al., 2008).

Previous studies suggest that there are several instruments that can be used to reduce the potential expropriation by controlling shareholders in a weak investor protection system. To compensate for the weak shareholders' rights and inadequate legal protection, investors use corporate governance mechanisms to protect their rights. According to Klapper and Love (2004), investors in countries with a weak investor protection system use corporate governance quality to assess controlling shareholders' commitment to protecting investor rights. Firms with better corporate governance quality and a higher level of disclosure enjoy better performance and higher market valuation, and this relationship is stronger in the face of a weak investor protection system (Klapper and Love, 2004; Renders and Gaeremynck, 2012).

The improvement of corporate governance quality has an impact not only on the relationship between the controlling and minority shareholders but also on the manager-shareholders relationship. According to previous studies (Dey, 2008; Lefort and Urzúa, 2008), firms with a greater potential for conflicts of interest between managers and shareholders implement better governance mechanisms as a way to protect the shareholders from managerial entrenchment activities.

Gompers et al. (2003) also suggest that firms with stronger shareholders' rights enjoy a higher firm value, higher profits, higher sales growth and lower capital expenditure compared to firms with weaker shareholders' rights. Moreover, Chung et al.

(2010) also find that the higher corporate governance index score is positively related to the reduction of information asymmetry and the increase of firms' liquidity.

The effort to improve the investor protection system and reduce the potential for expropriation by controlling shareholders can also come from the government of a country (Claessens and Yurtoglu, 2013). The government might implement corporate governance mechanisms that it believes could address the problem of controlling shareholders' expropriation activities, such as the separation of management and control institutions by using a two-tier board system (Douma, 1997; Jungmann, 2006; Adams and Ferreira, 2007; Belot et al., 2014; Bezemer et al., 2014).

Previous studies (Jungmann, 2006; Belot et al., 2014) indicate that the two-tier board system is more suitable for addressing the conflict between controlling and minority shareholders. The main intention of the two-tier board system is the protection of shareholders' and public interest through the separation of duties between control and management inside the firm.

Two important caveats for the supervisory board to effectively perform their function in protecting minority shareholders' and other stakeholders' interests are the restriction on dual board membership and the independence level of the board (Daily et al., 2003; Dahya et al., 2008). A strong and independent supervisory board is essential for an effective monitoring process and the protection of firm interests from controlling shareholders' attempts to extract firm resources for their own benefit (Jungmann, 2006; Dahya et al., 2008).

Moreover, by placing the authority to remove executive board members, set executive board compensation and verify strategic decisions into the hands of the supervisory board, the supervisory board in a two-tier board system also becomes a key internal mechanism to monitor and control management activities (Bezemer et al., 2014). Independent board members have incentives to restrict managers' tendency to expropriate firm resources (Fama and Jensen, 1983). These incentives are stronger if the independent board members are facing human capital losses, such as a loss of reputation and a perceived lack of skills or knowledge by the public if they fail to do their duty effectively (Dahya et al., 2008).

The governments of countries with weak investor protection might also try to improve investor protection by issuing new regulations (La Porta et al., 2002), such as increasing minority shareholders' rights, a prohibition on issuing loan guarantees by firms to controlling shareholders, and regulations regarding asset transfer to related parties (Berkman et al., 2010). However, previous studies also suggest that government actions

to improve investor protection systems via the implementation of corporate governance mechanisms and to improve investor protection regulations might still result in failure and ineffectiveness in improving the quality of investor protection, although the process of creating the regulations and implementing the corporate governance mechanism already consumes a considerable amount of costs and resources (Claessens, 2006).

The two main barriers to the sufficient and adequate improvement of the investor protection system and corporate governance quality are the resistance of powerful politicians and their business counterparts to relinquishing the benefits they receive from the status quo setting (La Porta et al., 2000; Claessens, 2006). For examples, while the connected politicians might seem to support the government actions to improve the investor protection system, they also place loopholes in the regulations that can still be exploited by their business counterparts (Chen et al., 2008). Alternatively, they create regulations that look good in writing but also blunt the implementation process of that regulation (Jiang et al., 2010), or they use their political power to gain favourable decisions in litigation cases (Sun et al., 2016).

There are two major reasons to believe that the impact of the barriers is significantly diminished in this study sample. First, one of the corporate governance mechanisms chosen to address the problems of concentrated ownership and scarce separation of ownership and control is the adoption of a two-tier board system. The implementation of the two-tier system in Indonesia required listed firms to create two separate boards: the board of commissioners (BOC), which acts as representatives of shareholders and has the function of non-executive directors on a one-tier board, and the board of directors (BOD)[12], which runs the firm' day-to-day operations and has the function of executive directors on a one-tier board.

The second reason is the behaviour of large controlling shareholders. Unlike in pre-reform Indonesia, where politically connected firms were less reliant on investor funding, all firms, especially listed firms in the post-reform era, need to secure investors or creditor funding to grow their business (Leuz and Oberholzer-Gee, 2006). The fact that the Indonesian stock market grew quite significantly after the political reform era, from 260 trillion rupiahs (27 billion USD) in the year 2000 to 4,873 trillion rupiahs (353 billion USD) in the year 2015, also indicates the prospect of growth for investors.

In order to attract investors and gain creditors' trust, the controlling shareholders need to convince these investors and creditors that they will refrain from any activities

[12] A typical BOD in Indonesia usually consists of a board chairman (CEO), finance director, operational director, marketing director and general affair/human resources director.

that would harm the firm's long term value, such as the expropriation of firm resources for their benefit (Durnev and Kim, 2005; Dahya et al., 2008). One of the signals that the controlling shareholders can give to convince the investors and/or creditors of their commitment is through the appointment of politically connected board members, especially in a role of an independent member of a supervisory board (Dahya et al., 2008).

From the politicians' perspective, the appointment as a board member in a listed firm brings significant benefits to social status and financial reward. Regarding social status, only a handful of politicians are appointed as board members of listed firms. This appointment enhances both the politician's reputation as a person and the perception of their having the necessary skills, knowledge and network to benefit the firm (González-Bailon et al., 2013). The appointed politically connected board member then needs to demonstrate their capabilities to enhance firm performance (Niessen and Ruenzi, 2010). Success will enhance the politician's reputation, while scandal and failure will tarnish their reputation (Dahya et al., 2008).[13]

With regard to financial reward, the board members of listed firms in Indonesia receive around 10 times the average salary of listed firm employees. This is coupled with the fact that the board members of firms with political connections receive on average a two-fold higher remuneration level than non-connected firms. Politically connected board members act responsibly for these two main reasons: they have reputational and financial rewards to protect.

There have been several high-profile criminal cases involving boards of directors in Indonesia in the last few decades. Most of the cases involving the directors of state-owned enterprises revolve around bribery and corruption, whereby these directors received a certain amount of money or other benefits to make a decision that would be beneficial to the giving parties but which was not necessarily the best decision for the firms.[14] In many of these cases, the monitoring and supervising role of the BOC was quite crucial in uncovering the misdeeds and bringing the directors to court.

There are also several cases where the BOC of listed firms in Indonesia exercised their rights on behalf of shareholders' interests and terminated the appointment of the

[13] Politically connected board members that abuse their position or have their reputation tainted because of corruption cases lose their position, not only for the current period but also in the future. There are two examples of this situation in our sample: Irman Gusman (2016) and Patrialis Akbar (2016), a former parliament member and a former minister who were indicted for graft cases and are serving jail sentences for their actions.

[14] There have been legal cases against the directors of listed SOEs, such as Krakatau Steel (2019), Garuda Indonesia (2017 & 2018), Adhi Karya (2013) and Kimia Farma (2006), and non-listed SOEs like Angkasa Pura (2019), PAL (2017), Pertamina (2009) and Kereta Api Indonesia (2005).

BOD because they no longer believed in the BOD intentions.[15] These cases highlight the role of the BOC in performing their duties to monitor management activities and protect shareholders' interests. Moreover, in the cases where a member of the BOC is involved in a financial case, such as accepting a bribe, these disgraced members of the boards of commissioners lose their reputation, credibility, and current and future potential remuneration in becoming board members of listed firms in Indonesia.[16] With their reputation and potential financial remuneration at stake, we expect politically connected board members in Indonesia to try to fulfil their contractual duties as a BOC member of a listed firm in Indonesia to the best of their abilities.

Based on this argument, the corresponding testable hypothesis is:

Hypothesis 1: *Political connectedness is negatively related to firms' internal conflicts of interest.*

4.3.2 The joint effect of political connections and corporate governance quality on firms' internal conflicts of interest

Previous studies suggest that an improvement of corporate governance quality is effective in reducing firms' internal conflicts of interest (La Porta et al., 2000; Gompers et al., 2003; Klapper and Love, 2004; Bebchuk and Cohen, 2005; Dey, 2008; Young et al., 2008; Chung et al., 2010; Chen et al., 2012b; Renders and Gaeremynck, 2012). However, whether political connections substitute or complement corporate governance in mitigating firms' internal conflicts of interest is an unanswered question, which we explore in this section.

The history of modern corporate governance standards and practices can be traced back to the Cadbury Committee report in December 1992 (Dahya et al., 2002; Claessens, 2006). The Cadbury Committee defines corporate governance as the system by which companies are directed and controlled (Cadbury, 1992). After further development, the definition of corporate governance no longer focuses only on shareholders. The objective of a good corporate governance framework is to maximise the contribution of firms to the overall economy, including all stakeholders such as debtholders, suppliers, financial markets, employees, society and the environment (Claessens, 2006).

[15] The BOC of Tiga Pilar Sejahtera (2018) and Sugih Energy (2016) decided to terminate the BOD and take over the management of the firm for a temporary period until the next emergency AGSM, which is usually scheduled at least 30 days after the BOD termination.

[16] Besides the Irman Gusman and Patrialis Akbar cases mentioned in note 9, there are also several cases that involved non-politically connected BOC members, such as Antonius Tonbeng (Bhakti Investama).

The main goal of corporate governance implementation in the broader sense is to ensure that the management of the firm respects the rights and interests of company stakeholders, and for these stakeholders to act responsibly in regard to the protection, generation, and distribution of wealth invested in the firm (Aguilera et al., 2008). The previous literature suggests that the improvement of corporate governance is one of the main instruments to mitigate firms' internal conflicts of interest, whether between controlling and minority shareholders or between managers and shareholders.

In most emerging countries, the main conflict inside the firm does not always happen between managers (agent) and shareholders (principal), but can also be between controlling shareholders (principal) and minority shareholders (also principal) (Young et al., 2008). The conflict emerges as the combinatory effect of several factors: the existence of major, large controlling shareholders (Dahya et al., 2008; Young et al., 2008); the set-up of business structures, such as pyramid holdings (Almeida and Wolfenzon, 2006; Morck, 2009); and a weak legal and investor protection system (La Porta et al., 2000; Claessens and Fan, 2002; Young et al., 2008).

To compensate for the weak shareholders' rights and weak legal protection, investors use corporate governance mechanisms to protect their rights. According to Klapper and Love (2004), controlling shareholders in countries with a weak investor protection system may use corporate governance to signal their commitment to protecting investor rights. Their research results suggest that firms with better corporate governance quality enjoy better performance and higher market valuation.

In a similar vein, Renders and Garaemynck (2012) show that the combination of better corporate governance structures and a high-quality disclosure environment leads to higher firm value, and the relationship is stronger for firms with a higher potential for firms' internal conflicts of interest. These results suggest that investors believe in the effectiveness of higher governance quality in protecting their rights, especially in the face of a weak investor protection system and large controlling shareholder domination. The improvement of corporate governance quality has an impact not only on the principal-principal conflict but also on the agent-principal conflict. According to Dey (2008), firms with greater internal conflicts of interest implement better governance mechanisms as a way for shareholders to protect themselves from managerial entrenchment activities.

Gompers et al. (2003) also suggest that firms with stronger shareholders' rights enjoy higher firm value, higher profits, higher sales growth and lower capital expenditure compared to firms with weaker shareholders' rights. Moreover, Chung et al. (2010) also

find that a higher corporate governance index score is positively related to a reduction of information asymmetry and an increase in firms' liquidity.

Regarding the relationship between political connections and corporate governance quality, previous studies suggest that political connections can be used to substitute corporate governance quality, especially in countries with a weak investor protection system and the presence of large controlling shareholders.

Having political connections allows connected firms to gain easier access to credit and improve firm performance (Boubakri et al., 2012a), reducing the need to improve corporate governance quality (Yeh et al., 2013) and avoiding the requirement of greater transparency and disclosure usually required by third party investors/creditors (Leuz and Oberholzer-Gee, 2006). However, in our setting, the appointment of a politically connected board is also a signal of the controlling shareholders' commitment to not expropriate outside shareholders' interests, similar to the signal of the improvement of corporate governance quality.

Politically connected board members could, therefore, help a stronger good corporate governance system to work effectively, that is, executing its role in advising, supervising and monitoring the management's work as well as providing important network, knowledge and skills in their respective fields (Niessen and Ruenzi, 2010; González-Bailon et al., 2013). Based on these arguments, this study expects that political connections and corporate governance work hand-in-hand in mitigating firms' internal conflicts of interest.

Therefore, the corresponding testable hypothesis is as follows:

Hypothesis 2: *The negative relationship between political connectedness and firms' internal conflicts of interest is more pronounced in firms with better corporate governance quality.*

4.3.3 The joint effect of political connections and information asymmetry on firms' internal conflicts of interest

Su et al. (2008) suggest that a weak investor protection system and the presence of large controlling shareholders in emerging economies could lead to a severe information asymmetry problem between insiders (managers and controlling shareholders) and outsiders (investors and creditors). Thus, minority shareholders are likely to encounter expropriation by controlling shareholders who control the firm's decision-making process via affiliated board members.

High levels of ownership concentration and ineffective monitoring mechanisms lead to more frequent conflicts between the controlling and minority shareholders (Young et al., 2008). Moreover, less information can be obtained regarding the fundamental performance of a firm, creating a volatile share price movement based on noise trading (Morck et al., 2000).

There are mixed views regarding the relationship between political connections and information asymmetry. On the one hand, some studies suggest that political connections increase the level of information asymmetry, especially in countries with a weak investor protection system. According to Chaney (2011), politically connected firms have a lower quality of accounting information since these firms need to obscure the politically connected transaction costs and benefits. Chen et al. (2011a) also find that the controlling shareholders of politically connected firms form a concentrated control structure that allows them to have exclusive decision-making power to protect themselves and politicians from public scrutiny.

On the other hand, some studies suggest that having political connections reduces the level of information asymmetry, especially in countries where politicians are held accountable for their actions and are facing a higher level of public scrutiny. The requirement for politicians to disclose and publish their political connectedness to firms and the remuneration they receive from these firms makes politicians more selective so they only associate themselves with big firms with a good reputation (Niessen and Ruenzi, 2010). Politicians may also use their firm connections to directly convey the aspirations of their constituents to the connected firms (Niessen and Ruenzi, 2010; Amore and Bennedsen, 2013). Accountable politicians improve public trust in politicians (Butler et al., 2009) and enhance corporate governance quality (Djankov et al., 2010).

Our primary hypothesis is built on the premise that political connectedness can become a tool to mitigate firms' internal conflicts of interest, even in the face of a weak investor protection system and large controlling shareholders. Our second hypothesis assumes that the existence of better corporate governance quality improves the effectiveness of political connectedness in mitigating firms' internal conflicts of interest.

Regarding information asymmetry, we expect that the role of political connections in reducing firms' internal conflicts of interest will be stronger in firms with a higher level of information asymmetry, since a higher level of information asymmetry presents a higher potential for expropriation activities, whether by controlling shareholders (Su et al., 2008; Young et al., 2008; Chen et al., 2011a) or by managers of the firms (Richardson, 2000; Graham et al., 2005). Based on these explanations, this study expects that political

connectedness will be more effective in reducing firms' internal conflicts of interest in firms with a higher level of information asymmetry.

Therefore, the corresponding testable hypothesis is as follows:

Hypothesis 3: *The negative relationship between political connectedness and firms' internal conflicts of interest is more pronounced in firms with a higher level of information asymmetry.*

4.4 Research design

4.4.1 Measurement of firms' internal conflicts of interest

Numerous models are used to measure principal-principal and agent-principal conflict in the literature. Some of the most common measures used in previous studies to measure agent-principal conflicts are the expense and asset utilization ratio (Ang et al., 2000; Anderson et al., 2003; Singh and Davidson III, 2003; Dey, 2008; Aktas et al., 2019) and the interaction between growth opportunities and free cash flow (Doukas et al., 2000; Doukas and Pantzalis, 2003; Chung et al., 2005a; Chung et al., 2005b; Doukas et al., 2005; Pawlina and Renneboog, 2005; McKnight and Weir, 2009; Henry, 2010; Rashid, 2016).

Meanwhile, some of the most common measures used in previous studies to measure principal-principal conflicts are the difference between cash flow and control rights (wedge) (Guney and Ozkan, 2005; Jiang et al., 2010; Liu and Magnan, 2011; Renders and Gaeremynck, 2012) and the other receivables ratio (Jiang et al., 2010; Guariglia and Yang, 2016; Sun et al., 2017; He and Luo, 2018).

1.1.1.1. Other receivables ratio

The measure for principal-principal conflict in this study is the other receivables ratio. The reason for using this measure is because there is a similarity to the use of other receivables as a tool to expropriate minority shareholders with previous research. Jiang et al. (2010), Guariglia and Yang (2016) and He and Luo (2018) emphasise how the existence of major controlling shareholders and the regulation regarding the other receivables disclosure makes other receivables a somewhat perfect tool for majority shareholders to siphon money by giving unsecured loans with no interest payments and no due date of loan maturity to parties affiliated with the major shareholders.

Moreover, the pattern of other receivables use in Indonesian listed firms is similar to those in China, although the scale of abuse is not as rampant as in China. Detailed observations on firms with a high level of other receivables in their financial statement

reports (above 10%) show that some firms are using other receivables accounts to give loans to related parties without any form of guarantee/collateral, no interest and no maturity date on the payment of the loans.[17] Therefore, a higher other receivables ratio could indicate a higher level of abuse of other receivables by major shareholders and indicate a higher level of principal-principal conflict.

The other receivable ratio (OREC) is formulated as other receivables scaled by total assets, as used in several studies, such as Jiang et al. (2010), Guariglia and Yang (2016), Sun et al. (2017) and He and Luo (2018).

$$OREC = (OTHER\ RECEIVABLES) / (TOTAL\ ASSETS) \quad (4.1)$$

1.1.1.2. *Interaction between growth opportunities and free cash flow*

The measure for agent-principal conflict in this study is the interaction between growth opportunity and free cash flow. The reason for using this measure is the relevancy of this measure to other chapters of this study (earnings management and investment inefficiency). According to Jensen (1986), manager utility is intrinsically related to the combination of firms' growth opportunities and the level of firms' free cash flow. Managers of firms with a high level of free cash flow and low growth opportunity could invest in investment projects with marginal or even negative net present value (NPV) and manipulate earnings to camouflage the effects of these non-wealth-maximizing investment projects (Gul and Tsui, 2001).

To measure growth opportunities, this study uses the market-to-book ratio (MTB) or the simplified approximation of Tobin's Q, which is the ratio of the book value of total assets minus the book value of equity plus the market value of equity scaled by the book value of assets (Doukas et al., 2000; Khalil and Simon, 2014; Rashid, 2016). Firms with an MTB value below 1 are considered as firms with low growth opportunity (Doukas et al., 2000), which can also signal poor management (Henry, 2010; Rashid, 2016). A dummy variable Q is created to represent the firm's growth opportunity. Firms with an

[17] Some extreme examples of other receivables usage as legal tunnelling tools are the Wicaksana Overseas report in 2010, which showed unsecured other receivables loans to affiliated companies with no interest and no maturity date amounting to 50 billion rupiahs (± 5 million USD), while the total amount of account receivables was only 30 billion rupiahs (± 3 million USD); the Sigmagold Inti Perkasa report in 2014 showed unsecured other receivables loans to affiliated companies with no interest and no maturity date with a sum almost ten times the amount of the account receivables transaction with the same affiliated company, along with unexplained third-party other receivables loans with a total amount 2.2 times larger than the total account receivables value; and the Bekasi Asri Pemula 2010 report, which showed a zero account receivables amount and unsecured related parties' long-term loans without interest or maturity dates in the other receivables account, constituting over 17% of the total assets value for that year. In summary, while the other receivables ratio does not capture all of the majority shareholder expropriation, it serves as a valid and parsimonious proxy in our research context.

MTB value below 1 are assigned the Q value of 1, and firms with an MTB value above 1 are assigned the Q value of 0.

Free cash flow is defined as cash flow beyond what is necessary to maintain assets in place and to finance expected new investments. We are following the Richardson model (Richardson, 2006) to measure free cash flow since this model incorporates two important aspects in its measure: the level of cash flow needed to maintain assets already owned and the necessary financing expected for new investment projects. The free cash flow ratio, FCF, is measured as the sum of the cash flow from operation, amortisation and depreciation expenses minus research and development expenses divided by the sum of average total assets, less expected (normal) investment projects.

Expected (normal) investment is the predicted value of the OLS regression from the following specification:

$$I\_NEW_{it} = \beta_0 + \beta_1 MTB_{it-1} + \beta_2 LEV_{it-1} + \beta_3 CASHHOLD_{it-1} + \beta_4 AGE_{it-1} + \beta_5 Size_{it-1} + \beta_6 ROA_{it-1} + \beta_7 I\_NEW_{it-1} + \sum YEAR_i + \sum INDUSTRY_t + \varepsilon_{it} \quad (4.2)$$

where I_NEW is the firm's new investment expenditure, defined as the sum of capital expenditures, research and development expenditures, and acquisitions minus sales of fixed assets and minus amortisation and depreciation expenses; MTB is the market-to-book ratio, the ratio of the book value of total assets minus the book value of equity plus the market value of the equity to book value of assets; LEV is the leverage ratio, total debt divided by total assets; CASHHOLD is the cash holding ratio, cash and cash equivalent divided by total assets; AGE is firm age; SIZE is firm size, natural logarithm of total assets; ROA is net income divided by total assets; where the subscript i indexes industries, there are 8 industry indicator variables (using Indonesian Stock Exchange groupings) in this regression; and t indexes years (t = 2010–2015).

The measure for agent-principal conflict, QFCF, is the interaction between the growth opportunity variable, Q, with the free cash flow ratio variable, FCF. Firms with low growth opportunity and a high level of free cash flow are considered as poorly managed firms, and they are more susceptible to a higher level of agent-principal costs whereby managers can engage in value-wasting investment activities. As such, a higher value for QFCF is representative of a higher potential for agent-principal conflict.

4.4.2 Empirical model

To test the relationship between political connections and firms' internal conflicts of interest, we use the following specification:

$$CONFLICT_{it} = \beta_0 + \beta_1 PC_{it} + \beta_2 TOP5\_OWN_{it} + \beta_3 PBOARD_{it} + \beta_4 AUD_{it} + \beta_5 CG_{it} + \beta_6 SIZE_{it} + \beta_7 AGE_{it} + \beta_8 LEV_{it} + \beta_9 TANG_{it} + \beta_{10} ASYM_{it} + \beta_{11} DPR_{it} + \beta_{16} CFOTA_{it} + \beta_{17} ROA_{it} + \beta_{18} MTB_{it} + \sum YEAR_{it} + \sum INDUSTRY_{it} + \varepsilon_{it} \quad (4.3)$$

where CONFLICT is one of the conflict measures: the other receivables ratio/OREC (principal-principal conflict) and the interaction between growth opportunities and free cash flow/QFCF (agent-principal conflict) discussed in the previous section.

PC is an indicator variable coded 1 if the firm has political connections, 0 otherwise. There are many ways to define political connections from the literature. Fisman (2001) and Johnson and Mitton (2003) define political connectedness as a situation when a business is owned by people with close connections to political power and the value of the firm is affected by these connections. Meanwhile, Faccio (2006) identify a firm as a politically connected firms if at least one of its large shareholders (shareholders with at least 10% of voting shares), or one of its board members is a current/former member of parliament, current/former ministers or having close relationship to top politicians or political party.

This study follows Faccio (2006) definition to identify politically connected firms. Firms are categorised as politically connected (PC) if at least one large shareholder (controlling at least 10% of the votes directly or indirectly) or its board member (BOC/BOD) is a current/former member of parliament, a current/former minister, current/former high-ranking government officials, or having close relationship to top politicians or political party.

We expect a negative relationship between PC with all measures of firms' internal conflicts of interest. Thus, politically connected firms are expected to have a lower level of firms' internal conflicts of interest than non-connected firms.

This study includes several firm-specific control variables used in the prior literature. There are conflicting results regarding the effect of firm size on agent-principal and principal-principal conflicts from the literature. On the one hand, previous studies suggest that larger and mature firms are more likely to have a higher level of free cash flow but a lower level of growth opportunity, indicating a higher level of firms' internal conflicts of interest (Guariglia and Yang, 2016). Moreover, the greater complexity of large firms sometimes results in difficulties in monitoring management actions (Doukas

et al., 2005; Belghitar and Clark, 2015), which also indicates a higher level of firms' internal conflicts of interest for large firms.

On the other hand, previous studies also suggest that larger firms are associated with a lower likelihood of agent-principal and principal-principal conflicts since large firms are exposed to higher public pressure, are expected to be better managed, and enjoy economies of scale in monitoring opportunistic managerial behaviour (Himmelberg et al., 1999; Chen and Yur-Austin, 2007). Firm size, SIZE, is defined as the natural logarithm of total assets expressed in Indonesian Rupiahs.

While older firms can be associated with being larger, they are also associated with success. Older firms can also be more efficient due to the learning curve (Ang et al., 2000) and are able to survive because they are more successful (Schulze et al., 2001). Moreover, older firms are viewed as being relatively more stable and having better management experience and capabilities than younger firms (La Porta et al., 1999; Morck and Yeung, 2003; Stubben, 2010). Firm age, AGE, is measured as the natural logarithm of firm age since its year of foundation.

Previous studies suggest that leverage can be used as a mechanism to mitigate firms' internal conflicts of interest. A higher level of leverage would be followed by increased monitoring by creditors, thus limiting the probability of firm resource misappropriation (Ang et al., 2000; Harvey et al., 2004; Garanina and Kaikova, 2016). Leverage, LEV, is measured as the ratio of total debts to total assets.

Furthermore, a higher value of the asset tangibility ratio indicates the investment level the firm puts into its productive assets. Firms with a higher level of tangible assets should expect a higher level of growth and better performance, which means lower internal conflicts of interests (Giannetti, 2003). The investments put into these assets also reduce the level of free resources available for misappropriation (Harvey et al., 2004; He and Luo, 2018). Asset tangibility, TANG, is defined as the ratio of net property, plant and equipment divided by total assets.

The next control variable is information asymmetry, measured as the ratio of the difference between the daily bid price minus the ask price divided by the average value of the daily bid and ask price for a one-year period (Coller and Yohn, 1997). The theoretical models of the bid-ask spread suggest that a portion of the bid-ask arises from information asymmetry, and the spread becomes wider when the asymmetry is perceived to be greater (Glosten, 1987; Coller and Yohn, 1997). A higher level of information asymmetry leads to a potentially higher level of firms' internal conflicts of interest

because minority shareholders do not have enough information to know whether misappropriation of firm resources is happening (Beatty and Harris, 1999).

Some studies also suggest that dividends can play an important role in reducing agent-principal and principal-principal conflict. Firms with a higher level of agent-principal conflict are less likely to pay dividends (Duygun et al., 2018), while firms with stronger minority shareholders protection are more likely to pay dividends (Fairchild et al., 2014). The dividend pay-out ratio, DPR, is measured as paid dividends (interim and final dividend) for the current financial year divided by the net income for the same period.

We also use the operating cash flow ratio as a control variable. According to Gibbs (Gibbs, 1993), high levels of cash flow from operations could lessen monitoring by capital market investors and enable managers to pursue opportunistic activities, such as business diversification to reduce unsystematic risk and fund unprofitable investment projects to increase the size of the firm. These activities will increase the managers' personal income and status at the expense of shareholder value, since managers are likely to have more prestige and receive higher remuneration in managing larger and more diversified firms (Pawlina and Renneboog, 2005). Cash flow from operations ratio, CFOTA, is measured as net cash flow from operating activities scaled by total assets.

A higher level of profitability is found to be associated with a lower level of firms' internal conflicts of interest since firms with a higher level of profitability are more likely to pay dividends (Choy et al., 2011) and are associated with better corporate governance quality (Cronqvist and Nilsson, 2003; Dey, 2008). Profitability is measured by the return on assets, ROA, defined as the ratio of net income to total assets.

The final control variable is growth opportunities, which is measured by the market-to-book ratios (MTB), which is the ratio of the book value of total assets minus the book value of equity plus the market value of the equity to book value of assets (Khalil & Simon, 2014). Firms that have a low growth opportunities, combined with a high level of free cash flow, have a potentially higher level of firms' internal conflicts of interest (Choy et al., 2011; Belghitar and Clark, 2015; Aktas et al., 2019).

Previous studies suggest that auditor quality is related to the perception of credible financial accounting by investors (Barton, 2005; Holm and Zaman, 2012). Big auditing firms, such as the big four public accounting firms, are expected to produce a high-quality external auditing process, which is a vital component of capital markets (Skinner and Srinivasan, 2012). Moreover, investors in emerging markets also seem to correlate the appointment of high-quality auditors with a reduction of agency costs (Fan and Wong, 2005; Mangena and Tauringana, 2007). Audit quality, AUD, is measured as a dummy

variable with a value of 1 for firms that use the service of one of the big four public accounting firms (EY, PwC, KPMG or DTT), and 0 otherwise (Guedhami et al., 2014)

The next governance variable is corporate governance quality, which is measured using the corporate governance index modified from the 2017 Good Governance Report (Institute of Directors, 2017). Previous studies suggest that the improvement of corporate governance quality can have a positive effect on reducing firms' internal conflicts of interest, whether principal-principal firms' internal conflicts of interest (Klapper and Love, 2004) or agent-principal firms' internal conflicts of interest (Chung et al., 2010).

While we are aware of the existence of several corporate governance indexes, such as the G-index (Gompers et al., 2003), Gov-score (Brown and Caylor, 2006) and the Corporate Governance Quotient/CGQ (Ertugrul and Hegde, 2009), in comparing the available data in the Indonesian setting, we choose to use the Institute of Directors index. This index offers the best option regarding the availability of data for our sample as well as the broadness of the corporate governance types coverage.

The index consists of five governance segments, namely board effectiveness, audit and risk, remuneration and reward, shareholder relations, and stakeholder relations, which are further classified into 38 items that are available in our research. The full list and the justification for each metric are provided in Appendix 1. While the five main segments are similar with the Institute of Directors' Corporate Governance Index, and we try to follow the list as far as we can, the itemised list is modified according to the availability and relevance of such related governance measures in Indonesia.[18]

The third governance variable is board strength, proxied by the presence/absence of board members with familial affiliation to the controlling ownership. Previous studies suggest that the existence of a strong board, marked by a higher level of independent directors and the non-involvement of the founder of the firm or their family member(s), especially in the setting of a weak legal system and the presence of large controlling shareholders, can help mitigate the firms' internal conflicts of interest (Dahya et al., 2008; Leung et al., 2014; Liu et al., 2015b). We use a dummy variable of 1 if any family member of the controlling shareholders serves as a board member (BOC and/or BOD) of the firm, and 0 otherwise.

We also add ownership concentration as a control variable. Ownership concentration, TOP5_OWN, is measured as the percentage of shareholding by the largest

[18] For example, in board effectiveness items, instead of the CEO duality (separate CEO and chairman) item, we use the participation of major/major shareholders in the BOC and BOD, since CEO duality is practically non-existent in Indonesia's listed firms due to the regulations.

five shareholders (Fan and Wong, 2002; Leuz et al., 2003; Firth et al., 2007). We expect a positive relationship between higher levels of ownership concentration with firms' internal conflicts of interest, since firms with a higher level of ownership in fewer major shareholders could lead to a higher level of minority interest expropriation (Claessens et al., 2000a; Villalonga and Amit, 2006; Jiang et al., 2010; Su et al., 2014). Finally, the subscript i indexes industries sectors and t indexes years (t = 2010–2015). All variables' definitions are included in Table 4.1.

Table 4-1. Variables definition

Variable	Description	Source
OREC	Other receivables ratio, measured as other receivables scaled by the total assets for the current period	Equation 3.1
QFCF	The interaction between dummy variable for low growth opportunities (Q) and the level of firm cash flow (FCF)	
PC	Political connections. Dummy variable with the value of 1 if the firm has political connections, 0 otherwise	Annual Report
TOP5_OWN	Ownership concentration, Percentage of shareholding by five biggest shareholders	Annual Report & Capital IQ
PBOARD	Dummy variable for the presence of board members (BOC/BOD) which has an affiliation with major/controlling shareholders	Compiled from Annual Report, Capital IQ, IPO Prospectus, and other reliable sources
CG	Corporate Governance Quality Index, continuous variable ranging from 0-1 based on the corporate governance quality index measures	Modified from Institute of Directors 2017 Corporate Governance Index (2017)
AUD	Dummy variable with the value of 1 if the firm is audited by one of the Big 4, and 0 otherwise	Annual Report
SIZE	Firm size, the natural logarithm of firm market capitalisation value at the end of the period	Bloomberg
AGE	Number of years since the legal foundation of the firm	Bloomberg
LEV	Total debt scaled by total assets	Bloomberg
TANG	Asset tangibility ratio, Net fixed assets (Net value of property, plant, and equipment after depreciation/nppe) scaled by total assets	Bloomberg
ASYM	Information asymmetry. The daily bid price minus ask price divided by the average value of daily bid and ask price for a one-year period. ASYM=(B-A)/[(B+A)/2]	Bloomberg
DPR	Dividend Pay-out Ratio, dividend divided by net income	Annual Report
ROA	Net income scaled by total assets	Bloomberg
MTB	Growth opportunity. Book value of total assets minus the book value of equity plus the market value of the equity to book value of assets	Bloomberg

4.5 Empirical results

4.5.1 Univariate analysis

Table 4.2 reports the descriptive statistics for the main variables used in the empirical analysis. All continues variables are winsorised at the 1% and 99% levels to mitigate the effect of outliers. While the univariate statistics do not show any statistically significant different values between politically connected firms and non-connected firms for both measures of conflicts, the analysis have not factored in the effect of different industries and time period. Table 4.2 also indicates that most of the controlling variables are significantly different across politically connected and non-connected firms.

The mean (median) value of the other receivable ratio (OREC) for the full samples is 0.0163 (0.0041). This descriptive statistics value is comparable with Jiang et al. (2010) and Guariglia and Yang (2016), where the mean (median) values of their other receivables measures were 0.081 (0.048), and 0.093 (0.042), respectively. Meanwhile, the mean (median) value of the interaction of growth and free cash flow (QFCF) for the full samples is -0.0030 (-0.0000). This descriptive statistics value is also comparable with Rashid (2016), where the mean (median) value of the QFCF measures was 0.038 (0.000).

Pearson correlations among the variables are reported in Table 4.3, and they also seem to show that there is no significant correlation between political connections and both measures of conflicts. The test result for multicollinearity indicates that there is no multicollinearity problem, with a mean VIF value of 1.44 and the highest score for individual VIF of 2.02 for the firm size variable. Besides the firm size variable, there is no other variable with a VIF value above 2.00.

Table 4-2. Descriptive statistic

Variable	Mean			Sig. Dif	Median			Sig. Dif	Standard Deviation			Observations		
	Full	PC	Non-PC		Full	PC	Non-PC		Full	PC	Non-PC	Full	PC	Non-PC
OREC	0.0163	0.0165	0.0161		0.0041	0.0043	0.0036		0.0369	0.0387	0.0349	1,590	809	781
QFCF	-0.0030	-0.0041	-0.0018		0.0000	0.0000	0.0000		0.0512	0.0431	0.0584	1,560	794	766
TOP5_OWN	0.7211	0.7063	0.7363	***	0.7394	0.7259	0.7500	***	0.1731	0.1731	0.1719	1,590	809	781
PBOARD	0.6686	0.5970	0.7426	***	1.0000	1.0000	1.0000	***	0.4709	0.4908	0.4375	1,590	809	781
AUD	0.3987	0.4648	0.3303	***	0.0000	0.0000	0.0000	***	0.4898	0.4991	0.4706	1,590	809	781
CG	0.4532	0.4897	0.4154	***	0.4155	0.4565	0.3838	***	0.1191	0.1289	0.0942	1,590	809	781
SIZE	7.8791	12.2000	3.4328	***	2.2053	5.1764	0.9779	***	17.9000	23.1000	8.0160	1,590	809	781
AGE	32.3189	34.0359	30.5403	***	30.0000	29.0000	31.0000		19.5994	23.5643	14.1818	1,590	809	781
LEV	0.4697	0.4839	0.4550	***	0.4727	0.4883	0.4613	***	0.2025	0.1938	0.2103	1,590	809	781
TANG	0.6007	0.5854	0.6165		0.5607	0.5152	0.6174	**	0.4001	0.4187	0.3796	1,590	809	781
ASYM	5.5828	3.9576	7.2663	***	1.5933	1.2545	2.1428	***	8.9213	6.9534	10.3188	1,590	809	781
DPR	0.1940	0.2286	0.1581	***	0.0000	0.0978	0.0000	***	0.3196	0.3535	0.2758	1,590	809	781
CFO	0.0699	0.0755	0.0641	**	0.0563	0.0591	0.0519	**	0.0973	0.0981	0.0961	1,590	809	781
ROA	0.0520	0.0577	0.0462	***	0.0387	0.0412	0.0354	*	0.0875	0.0944	0.0795	1,590	809	781
MTB	1.6813	1.7860	1.5729	**	1.1107	1.2364	1.0293	***	1.6764	1.7490	1.5916	1,589	809	780

Notes: *, **, and *** indicate significance of different at the 10%, 5% and 1% levels, respectively. Significance of differences is assessed based on two-tailed t-tests (mean) and Wilcoxon/Mann-Whitney tests(median)

Table 4-3. Correlation matrix

		1		2		3		4		5		6		7		8	
1	OREC	1.0000															
2	QFCF	-0.0130		1.0000													
3	PC	0.0055		-0.0232		1.0000											
4	TOP 5	-0.1309	***	0.0122		-0.0865	***	1.0000									
5	PBOARD	-0.0805	***	-0.0213		-0.1546	***	-0.0200		1.0000							
6	AUD	-0.0767	***	0.0422	*	0.1372	***	0.1650	***	-0.0569	**	1.0000					
7	CG	0.1214	***	0.0275		0.3120	***	-0.0329		-0.3972	***	0.3187	***	1.0000			
8	SIZE	0.0175		-0.0389		0.4376	***	-0.1574	***	-0.1532	***	0.4157	***	0.5439	***	1.0000	
9	AGE	0.0637	**	0.0002		0.0326		0.1038	***	-0.1343	***	0.1874	***	0.2576	***	0.1434	***
10	LEV	0.1251	***	-0.0480	*	0.0715	***	-0.0372		-0.0194		-0.0026		0.0663	***	0.1385	***
11	TANG	-0.1864	***	0.0086		-0.0388		0.1109	***	-0.1045	***	0.1472	***	0.1033	***	0.0142	
12	ASYM	-0.0678	***	0.0160		-0.1855	***	0.2974	***	0.0976	***	-0.0417	*	-0.2243	***	-0.3264	***
13	DPR	0.0329		0.0417	*	0.1104	***	0.1354	***	-0.0847	***	0.3069	***	0.2255	***	0.2193	***
14	CFO	-0.1109	***	0.4671	***	0.0591	**	0.1093	***	-0.0987	***	0.2900	***	0.1989	***	0.1376	***
15	ROA	-0.0700	***	0.0967	***	0.0655	***	0.1095	***	-0.0729	***	0.2478	***	0.1586	***	0.1240	***
16	MTB	0.0143	***	0.0316		0.0636	**	0.0296		-0.1094	***	0.1925	***	0.0960	***	0.0518	**
		9		10		11		12		13		14		15		16	
9	AGE	1.0000															
10	LEV	-0.0153		1.0000													
11	TANG	0.0722	***	0.0605	**	1.0000											
12	ASYM	0.0030		-0.0399		0.0424	*	1.0000									
13	DPR	0.2368	***	-0.0826	***	-0.0329		-0.0420	*	1.0000							
14	CFO	0.1221	***	-0.1137	***	0.1630	***	-0.0402		0.3349	***	1.0000					
15	ROA	0.1911	***	-0.2440	***	-0.1773	***	-0.0705	***	0.4035	***	0.5390	***	1.0000			
16	MTB	0.0189		-0.0765	***	-0.0435	*	-0.0742	***	0.2808	***	0.4053	***	0.4609	***	1.0000	

Notes: *, **, and *** indicate significance of different at the 10%, 5% and 1% levels, respectively

4.5.2 Main regression results

Table 4.4 presents the results of the second-stage regression analysis of the relationship between political connections and both earnings management measures. The regression is run by including industry and year dummies as well as robust standard errors clustered at firm-level.

The first stage of the estimation involves a probit regression of political connections against the instrument variables, the percentage of connected firms in an industry, *PCTPC_IND*, and regional unemployment rate, *UNEMP*. The estimated probability of political connections, PC (i.e., the treatment effect measure), is generated in the first stage. The first-stage fitted value for political connections, PC-FIT, is then included in the second-stage regression, in which the dependent variable is firms internal conflicts of interest measures (OREC and QFCF) to mitigate the endogeneity problem and correct for any omitted variable bias (Greene, 2007).

The results show a statistically significant negative relationship (at the 1% level) between political connections (PC-FIT) and the measure of principal-principal conflict (OREC) as well as the measure of agent-principal conflict (QFCF), supporting our hypotheses and the argument that the existence of politically connected boards is associated with lower firms' internal conflicts of interest, either for the conflict between majority and minority shareholders (as measured by OREC) or between managers and shareholders (as measured by QFCF).

There is only one result regarding the principal-principal conflicts that is consistent with our predictions. The other receivables ratio has a negative and statistically significant relationship, at the 1% level, with the firms' profitability ratio. This result is consistent with previous studies' suggestion that a higher level of profitability is found to be associated with a lower level of principal-principal conflict since firms with a higher level of profitability are more likely to pay dividends (Choy et al., 2011) and are associated with better corporate governance quality (Cronqvist & Nilsson, 2003; Dey, 2008).

Meanwhile, the other control variables which have a statistically significant relationship with the other receivables ratio show contradicting results from previous studies. Ownership concentration, information asymmetry and the operating cash flow ratio have negative and statistically significant relationships, all at the 10% level, with the other receivables ratio. Corporate governance quality, firm age, leverage (all three significant at the 5% level) and growth opportunities (at the 10% level) have positive and statistically significant relationships with the other receivables ratio.

Table 4-4. Second-stage regression on the relationship between political connections and internal conflicts using the Heckman treatment effect

	OREC	QFCF
	1	2
PC-FIT	-0.0513***	-0.0519***
	(0.0099)	(0.0094)
TOP5_OWN	-0.0181*	-0.0061
	(0.0108)	(0.0085)
PBOARD	-0.0016	-0.0014
	(0.0046)	(0.0037)
AUD	-0.0032	0.0005
	(0.0040)	(0.0028)
CG	0.0671**	0.0001
	(0.0327)	(0.0138)
SIZE	-0.0013	-0.0033***
	(0.0012)	(0.0012)
AGE	0.0065**	-0.0002
	(0.0028)	(0.0030)
LEV	0.0200**	-0.0031
	(0.0096)	(0.0072)
TANG	-0.0099**	-0.0172***
	(0.0042)	(0.0046)
ASYM	-0.0002*	0.0000
	(0.0001)	(0.0002)
DPR	0.0081	-0.0067*
	(0.0059)	(0.0040)
CFOTA	-0.0281*	0.3588***
	(0.0153)	(0.0383)
ROA	-0.0436***	-0.1180***
	(0.0167)	(0.0301)
MTB	0.0021*	-0.0036***
	(0.0011)	(0.0013)
Cons	0.0170	0.0760***
	(0.0011)	(0.0013)
Industry	Included	Included
Year	Included	Included
1st year regression		
PCTPC_IND	2.6783***	2.7708***
	(0.5906)	(0.6044)
UNEMP	0.9935**	1.0165**
	(0.3905)	(0.4913)
cons	-1.4046***	-1.4895***
	(0.2988)	(0.3158)
Fisher's z (LR)	0.8623***	0.7598***
	(0.2580)	(0.1539)
Ln Std. Dev	-3.2306***	-3.0138***
	(0.1222)	(0.0702)
Number of obs.	1,589	1,560
Wald chi2(26)	57.33***	141.19***
Wald test of indep. eqns.	11.17***	24.37***

Notes: Heckman treatment effect regression using maximum likelihood *t*-statistics calculated based on the robust standard errors clustered at firm-level. OREC is the measure of principal-principal conflict and QFCF is the measure of agent-principal conflict. PC-FIT is the fitted value of PC variable from the first stage regression with two instrumental variables (PCTPC_IND and UNEMP) Columns 1 &2 report regression coefficients and robust standard errors in parentheses.*, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively (two-tailed). Variables definitions are reported in Table 4.1.

These results suggest that older firms, firms with better corporate governance quality, firms with a lower level of information asymmetry, firms with a higher level of leverage and firms with a higher level of growth opportunities are related to a higher other receivables ratio, while a higher level of ownership concentration and a higher level of operating cash flow are related to a lower other receivables ratio.

There are two possible explanations regarding these results, as the consequences of the combinations between the nature of the other receivables account and the behaviour of large shareholders. First, to a certain extent, major shareholders' use of the other receivables account for dubious related party transactions are tolerated by investors as long as the firms are in good financial condition, there is adequate explanation and justification for these actions, and the perceived benefits of these actions outweigh the costs. Some related party transactions do no harm, and perhaps even benefit, shareholders (Gordon et al., 2004).

The other receivables account comprises loans given by the firms to various parties, e.g., employees, business partners, affiliated firms, shareholders, etc., which are not related to the firm's trading activities. Several firms with a high other receivables ratio use the other receivables account to fund future investment projects (PTPP, TOTL, LCGP) that cannot yet be acknowledged in the current period.[19] Other firms use the other receivables account to give unsecured non-interest bearing or low-interest loans to their business partner or affiliated firms (ASII, IMAS) to help foster the partnership and provide cheap funding to the business partner or affiliated firms.

Second, major shareholders use the other receivables account to obscure questionable expropriation activities in the hope that this will elude investors' detection and scrutiny, especially when the firm is doing well. Giving unsecured loans, no matter how good the intentions are, still poses a financial risk to the firm and violates the principle of good corporate governance practices. Moreover, while the benefits of these activities are mostly enjoyed by the major shareholders, the costs have to be borne by all shareholders, including minority shareholders (Enriques, 2015).

The positive correlation between corporate governance quality and the other receivables ratio occurs because better corporate governance practices force major shareholders to look for legal yet secretive ways to gain further benefits from firms under their control. Moreover, using related party transactions via the other receivables account

[19] PTPP, TOTL, LCGP all use similar methods, giving an advanced payment to a contractor for a future project based on an existing agreement; however, while these agreements can only be acknowledged as business transactions after the project has acquired all the necessary legal requirements, the contractor needs a significant amount of funds to start working on fulfilling the necessary legal requirements.

offers a legitimate and effective excuse for major shareholders, while the process of determining whether the value to the firms in terms of what it gets from the related party requires an often complex assessment of the transactions' merits from the firms' viewpoint; it is difficult for minority shareholders to challenge this, even in countries with a strong legal protection system (Enriques, 2015).

Further regression analysis splitting the ownership concentration into two categories, namely largest shareholders (top 1) and second to fifth largest shareholders (top 2 to top 5), shows that the significant negative relationship between ownership concentration and the other receivables ratio exists only for the second to fifth largest shareholders, indicating that the larger power of minority shareholders reduces the magnitude of the principal-principal conflict.[20]

Meanwhile, most of the statistically significant results for the control variables regarding the agent-principal conflict are consistent with previous studies' suggestions. The asset tangibility ratio (at the 1% level), dividend pay-out ratio (at the 10% level), profitability ratio (at the 1% level) and growth opportunities (at the 1% level) have negative and statistically significant relationships with QFCF, while the operating cash flow ratio has a positive and statistically significant relationship with QFCF that is significant at the 1% level.

These results are consistent with previous studies' suggestions that a higher asset tangibility ratio indicates a lower level of agent-principal conflict (Giannetti, 2003; Harvey et al., 2004; He and Luo, 2018), a higher dividend payment reduces the available free cash flow that can be misused by the managers (Duygun et al., 2018), and a higher profitability ratio indicates good management and less conflict potential (Cronqvist and Nilsson, 2003; Dey, 2008). The negative relationship between growth opportunities and QFCF and the positive relationship between operating cash flow and QFCF further confirm that firms with a higher level of growth and a lower level of cash flow have a lower level of agent-principal conflicts than firms with a lower level of growth and a higher level of cash flow (Doukas et al., 2000; Guariglia and Yang, 2016; Rashid, 2016).

The result from the firm size control variable on agent-principal conflict seems to support the view that a larger firm size is related to a reduction of potential conflict. Firm size has a negative and statistically significant relationship with QFCF, significant at the 1% level, which indicates a lower level of agent-principal conflict for bigger firms. The results support the notion that large firms are exposed to higher public pressure, are

[20] The regression is shown in Appendix 3.

expected to be better managed, and enjoy economies of scale in monitoring opportunistic managerial behaviour compared to smaller firms (Himmelberg et al., 1999; Chen and Yur-Austin, 2007).

4.5.3 Corporate governance quality subsamples regression results

The second hypothesis of this study is regarding the complementary relationship between political connections and corporate governance quality with regard to earnings management activities. If political connectedness is a substitute for corporate governance quality, then political connections should have a similar effect of reducing firms' internal conflicts of interest in both subsamples. If political connectedness is complementing corporate governance quality, the effect of firms' internal conflicts of interest reduction should be stronger in the firms with a higher level of corporate governance quality subsample than in the firms with a lower level of corporate governance quality subsample.

To test this hypothesis, we divide the samples into two categories of subsamples, namely high corporate governance quality and low corporate governance quality. The samples are divided based on the median value of the corporate governance quality control variable, CG.

The results in Table 4.5 seem to confirm the complimentary relationship between political connections and corporate governance quality regarding earnings management activities. Political connectedness has a negative and statistically significant relationship with the measure of principal-principal conflict (OREC) and the measure of agent-principal conflict (QFCF), and both results are significant at the 1% level for the subsample of firms with a higher level of corporate governance quality. These results indicate that political connections are effective in potential conflicts in firms with high corporate governance quality.

However, the results in Table 4.5 also suggest that in firms with a lower level of corporate governance quality, not only is political connectedness not effective in reducing conflicts, it is actually related to a higher level of both principal-principal and agent-principal conflicts. Political connectedness has a positive and statistically significant relationship with the principal-principal conflict measure (OREC) and the agent-principal conflict measure (QFCF), with both results also significant at the 1% level, for the subsample of firms with a lower level of corporate governance quality.

Table 4-5. Regressions results for the joint effect of political connections and corporate governance quality on firms' internal conflicts of interest

	HIGH-CG		LOW-CG	
	OREC	QFCF	OREC	QFCF
	1	2	3	4
PC-FIT	-0.0684***	-0.0473***	0.0343***	0.0655***
	(0.0118)	(0.0126)	(0.0064)	(0.0088)
TOP5_OWN	-0.0219	-0.0010	-0.0027	-0.0143
	(0.0171)	(0.0111)	(0.0093)	(0.0124)
PBOARD	-0.0107*	0.0030	0.0000	-0.0050
	(0.0055)	(0.0042)	(0.0031)	(0.0044)
AUD	-0.0050	0.0010	0.0021	0.0001
	(0.0055)	(0.0034)	(0.0026)	(0.0042)
SIZE	0.0004	-0.0034**	-0.0014	-0.0020
	(0.0017)	(0.0016)	(0.0011)	(0.0016)
AGE	0.0072	0.0000	0.0100***	0.0031
	(0.0045)	(0.0032)	(0.0029)	(0.0044)
LEV	0.0261	0.0140	0.0039	-0.0166*
	(0.0176)	(0.0098)	(0.0059)	(0.0088)
TANG	-0.0103**	-0.0164***	-0.0090*	-0.0098*
	(0.0051)	(0.0060)	(0.0050)	(0.0055)
ASYM	-0.0002	0.0000	-0.0003**	0.0000
	(0.0003)	(0.0003)	(0.0001)	(0.0002)
DPR	0.0147*	0.0000	-0.0021	-0.0195***
	(0.0089)	(0.0043)	(0.0031)	(0.0074)
CFO	-0.0313*	0.3017***	-0.0073	0.3866***
	(0.0189)	(0.0447)	(0.0128)	(0.0501)
ROA	-0.1015**	-0.0240	-0.0289**	-0.1350***
	(0.0412)	(0.0331)	(0.0131)	(0.0356)
MTB	0.0060**	-0.0065***	0.0000	-0.0030*
	(0.0027)	(0.0018)	(0.0005)	(0.0017)
Cons	0.0444	0.0560	0.0040	0.0190
	(0.0468)	(0.0358)	(0.0154)	(0.0290)
Industry	Included	Included	Included	Included
Year	Included	Included	Included	Included
1st year regression				
PCTPC_IND	1.9374***	1.9777***	3.1418***	3.3122***
	(0.7250)	(0.7417)	(0.7343)	(0.7338)
UNEMP	2.2238	4.4530	0.3394	1.0863**
	(1.4234)	(3.6170)	(0.6320)	(0.5384)
Cons	-0.8791**	-1.1052**	-1.8691***	-2.0549***
	(0.3694)	(0.4904)	(0.3754)	(0.3792)
Fisher's z (LR)	0.9659***	0.8085***	-0.939***	-1.0414***
	(0.3107)	(0.2340)	(0.3060)	(0.1378)
Ln Std. Dev	-3.0793***	-3.1025***	-3.4995***	-2.8866***
	(0.1322)	(0.1160)	(0.1236)	(0.0694)
Number of obs	795	786	794	774
Wald chi2(25)	64.41***	94.40***	69.07***	146.17***
Wald test of indep. eqns.	9.66***	11.93***	9.42***	57.11***

Notes: Subsamples regressions, dividing the samples into two subsamples with a similar number of samples, based on the median value of CG, the corporate governance quality control variable. Columns 1 &2 report regression coefficients and robust standard errors in parentheses for firms with a disclosure index score above the median value (HIGH-CG). Columns 3&4 report regression coefficients and robust standard errors in parentheses for firms with a disclosure index score below the median value (LOW-CG). OREC is the measure of principal-principal conflict and QFCF is the measure of agent-principal conflict. PC-FIT is the fitted value of PC variable from the first stage regression with two instrumental variables (PCTPC_IND and UNEMP) and lagged dependent variable. *, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively (two-tailed). Variables definitions are reported in Table 4.1.

The results from the corporate governance subsamples regression support our second hypothesis that the negative relationship between political connectedness and firms' internal conflicts of interest is more pronounced in firms with better corporate governance quality, and provide further evidence on the complementary relationship between political connections and corporate governance quality among Indonesian listed firms.

Moreover, the results also indicate that while generally politically connected firms in Indonesia are associated with the reduction of principal-principal and principal-agent conflicts (Table 4.4), the effectiveness is related with good corporate governance quality. Among politically connected firms with lower level of corporate governance quality there is actually an increase of principal-principal and principal-agent conflicts.

These results seem to confirm Davis et al. (1997) and Schillemans and Bjurstrom (2019) assertion that we should not always see agency theory and stewardship theory as competing approaches. Human behaviour is complex and cannot be explained by only one theory.

The reduction of principal-principal and principal-agent conflicts for politically connected firms with higher level of corporate governance quality and the increase of principal-principal and principal-agent conflicts for politically connected firms with lower level of corporate governance quality could support both agency and stewardship theory simultaneously. Politicians in connected firms can act responsibly and accountably in the existence of good corporate governance quality. However, politicians in connected firms can also act opportunistically in firms with lower level of corporate governance quality.

4.5.4 Information asymmetry subsamples regression results

The third hypothesis of this study concerns the joint effect of political connections and information asymmetry on principal-principal and agent-principal conflicts. To test this hypothesis, we divide the samples into two categories of subsamples, firms with a high level of information asymmetry and firms with a low level of information asymmetry. The sample is divided based on the median value of ASYM, the information asymmetry control variable.

The results in Table 4.6 show that political connectedness is effective in reducing the principal-principal conflict for both subsamples with high and low information asymmetry, but it is only effective in reducing agent-principal conflict for firms with a high level of information asymmetry.

Table 4-6. Regression results for the joint effect of political connections and information asymmetry on firms' internal conflicts of interest

	HIGH-ASYM		LOW-ASYM	
	OREC	QFCF	OREC	QFCF
	1	2	3	4
PC-FIT	-0.0410***	-0.0623***	-0.0603***	0.0241
	(0.0127)	(0.0107)	(0.0123)	(0.0372)
TOP5_OWN	-0.0048	-0.0137	-0.0234	0.0037
	(0.0093)	(0.0127)	(0.0165)	(0.0098)
PBOARD	0.0032	0.0027	-0.0032	-0.0030
	(0.0040)	(0.0056)	(0.0067)	(0.0046)
AUD	-0.0029	0.0043	-0.0060	0.0015
	(0.0041)	(0.0043)	(0.0059)	(0.0029)
CG	0.0848**	0.0029	0.0664*	-0.0074
	(0.0403)	(0.0256)	(0.0345)	(0.0149)
SIZE	0.0010	-0.0056***	-0.0023	-0.0027
	(0.0010)	(0.0019)	(0.0015)	(0.0015)
AGE	0.0034	0.0060	0.0088**	-0.0033
	(0.0035)	(0.0050)	(0.0037)	(0.0032)
LEV	0.0118	-0.0147	0.0199	0.0161*
	(0.0084)	(0.0104)	(0.0136)	(0.0091)
TANG	-0.0108***	-0.0193***	-0.0080	-0.0118*
	(0.0035)	(0.0063)	(0.0070)	(0.0061)
DPR	0.0067	-0.0166***	0.0082	0.0022
	(0.0049)	(0.0055)	(0.0087)	(0.0044)
CFO	-0.0316*	0.4814***	-0.0335	0.2384***
	(0.0170)	(0.0535)	(0.0223)	(0.0433)
ROA	-0.0085	-0.1653***	-0.0820***	-0.0510*
	(0.0153)	(0.0430)	(0.0302)	(0.0274)
MTB	0.0015	-0.0035**	0.0044**	-0.0047***
	(0.0011)	(0.0016)	(0.0020)	(0.0015)
Cons	-0.0338	0.1096***	0.0396	0.0261
	(0.0277)	(0.0385)	(0.0338)	(0.0373)
Industry	Included	Included	Included	Included
Year	Included	Included	Included	Included
1st year regression				
PCTPC_IND	2.9307***	3.0675***	2.0701***	2.0288***
	(0.7787)	(0.7701)	(0.7221)	(0.7724)
UNEMP	1.5363**	1.5787*	0.6989*	0.8201
	(0.7674)	(0.9459)	(0.3783)	(0.5543)
Cons	-1.7956***	-1.917***	-0.8608**	-0.8296**
	(0.3837)	(0.3966)	(0.3829)	(0.4118)
Fisher's z (LR)	0.7819**	0.8736***	0.8971***	-0.4042
	(0.3411)	(0.1569)	(0.2756)	(0.6610)
Ln Std. Dev	-3.4626***	-2.9353***	-3.1071***	-3.2642***
	(0.1836)	(0.0729)	(0.1308)	(0.1512)
Number of obs	794	782	795	778
Wald chi2(25)	38.57**	123.15***	47.98**	77.94***
Wald test of indep. eqns.	5.25**	31.02***	10.59***	0.37

Notes: Subsamples regressions using maximum likelihood with firm clustering and robust standard error, dividing the samples into two subsamples with similar number of samples, based on the median value of ASYM, the information asymmetry control variable. Columns 1 &2 report regression coefficients and robust standard errors in parentheses for firms with information asymmetry value above the median value (HIGH-ASYM). Columns 3 &4 report regression coefficients and robust standard errors in parentheses for firms with information asymmetry value below the median value (LOW-ASYM). OREC is the measure of principal-principal conflict and QFCF is the measure of agent-principal conflict. PC-FIT is the fitted value of PC variable from the first stage regression with two instrumental variables (PCTPC_IND and UNEMP) and lagged dependent variable. *, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively (two-tailed). Variables definitions are reported in Table 4.1.

The results show a statistically significant negative relationship (at the 1% level) between political connections (PC-FIT) and the measure of principal-principal conflict (OREC) for both subsamples of firms with high and low information asymmetry, and both results are significant at the 1% level. However, there is only a negative and significant relationship between political connection and the measure of agent-principal conflict (QFCF) for firms with a high level of information asymmetry and a non-significant result for firms with low information asymmetry. These results are consistent with our hypothesis and previous studies' suggestion that a higher level of information asymmetry is related to a higher level of firms' internal conflicts of interest (Beatty and Harris, 1999; Morck et al., 2000; Su et al., 2008; Young et al., 2008). The results for other control variables are largely consistent with the main regression results.

These results only partially support our third hypothesis that the negative relationship between political connectedness and firms' internal conflicts of interest is more pronounced in firms with a higher level of information asymmetry. Information asymmetry only have more pronounced effect on principal-agent conflict and not on principal-principal conflict. One possible explanation for these differences is that the problem of information asymmetry among Indonesian firms mainly exists between managers and shareholders and not between major and minority shareholders.

4.6 Robustness check

4.6.1 Alternative models to measure principal-principal and agent-principal conflicts

The first measure of agent-principal conflict used for the robustness test in this research is the sales, general and administrative expenses (SGA) ratio, which was originally developed by Ang et al. (2000) and modified by Sing and Davidson III (Singh and Davidson III, 2003). The SGA ratio (SGAREV) is measured as sales, general and administrative expenses scaled by total annual sales revenue.

The expense ratio measures the effectiveness of firm management in controlling the operating costs. A firm with a higher expense ratio experiences higher firms' internal conflicts of interest since these costs might arise because the manager makes poor investment decisions, lacks sufficient effort, resulting in lower revenues, or consumes executive perquisites that are not necessary, such as extravagant furniture or luxury company vehicles (Ang et al., 2000; Singh and Davidson III, 2003; Rashid, 2016).

The second measure of agent-principal conflict used for the robustness test in this research is the utilisation ratio, which was also developed by Ang et al. (2000). The utilisation ratio (UTIL) is measured as the total annual sales revenue divided by total assets.

The utilisation ratio measures the efficiency of firm management in using the firm's resources. A lower utilisation ratio can be due to poor management decisions that cause inefficient investments in the form of over-investment (investing in negative net-present-value investment projects) or under-investment (management not investing in enough projects to help generate revenue) (Ang et al., 2000; Singh and Davidson III, 2003; Rashid, 2016).

The first measure of principal-principal conflict used for the robustness test in this research is the research and development intensity ratio, which has been used by previous studies (Kim et al., 2008; Wang, 2010; Muñoz-Bullón and Sanchez-Bueno, 2011). The research and development intensity ratio (RND) is measured as total research and development expenses scaled by total assets.[21]

The research and development intensity ratio measure the level of firms' investment in research and development activities. The existence of large, major controlling shareholders may have a negative impact on research and development intensity because when the major shareholder wealth is largely tied up in the firm, it may prefer higher dividend payment and avoid engagement in innovative but risky projects (Muñoz-Bullón and Sanchez-Bueno, 2011).

The second measure of principal-principal conflict used for robustness test in this research is the interaction between sales growth and free cash flow. While Tobin's Q approximation used in the main regression measures future growth opportunities, the average sales growth measures present growth opportunities. While Doukas et al. (2000) use five years' sales growth average, we are using the three years' average growth rate to avoid losing too many samples. Firms are categorised as having a low growth rate if the average growth rate for the past three-year period is below that of the firms in the same industry for the same period.

$$SGAREV = Selling, General\ and\ Administrative\ Expenses\ /\ SALES \quad (3)$$

$$UTIL = SALES\ /\ TOTAL\ ASSETS \quad (4)$$

$$RND = Research\ and\ Development\ expenses\ /\ TOTAL\ ASSETS \quad (5)$$

[21] Several studies use total sales instead of total assets for the denominator of R&D intensity. The results are similar when total sales are used in the calculation.

Table 4-7. Alternative measures of agent-principal and principal-principal conflicts

	SGAREV	UTIL	RND	SGFCF
	1	2	3	4
PC-FIT	-0.1362**	0.6202***	0.1151***	-0.0503***
	(0.0602)	(0.2234)	(0.0429)	(0.0161)
TOP5_OWN	-0.0522	0.6104***	-0.0369	0.0084
	(0.0572)	(0.2047)	(0.0385)	(0.0075)
PBOARD	-0.0407**	0.0859	0.0118	0.0050
	(0.0205)	(0.0691)	(0.0125)	(0.0036)
AUD	-0.0294*	0.2226***	-0.0197*	-0.0035
	(0.0151)	(0.0840)	(0.0105)	(0.0032)
CG	-0.2256***	0.2463	0.1195**	0.0339*
	(0.0727)	(0.3002)	(0.0550)	(0.0178)
SIZE	-0.0061	-0.0959***	-0.0048*	-0.0009
	(0.0070)	(0.0232)	(0.0028)	(0.0013)
AGE	-0.0022	0.2018***	0.0347***	0.0052
	(0.0147)	(0.0636)	(0.0135)	(0.0033)
LEV	-0.2757***	1.2968***	-0.0410*	-0.0218***
	(0.0398)	(0.1759)	(0.0239)	(0.0075)
TANG	0.0316	-0.5470***	-0.0303**	-0.0227***
	(0.0223)	(0.1067)	(0.0147)	(0.0049)
ASYM	-0.0004	0.0063	0.0002	0.0002
	(0.0008)	(0.0043)	(0.0005)	(0.0002)
DPR	-0.0116	0.0032	0.0031	-0.0005
	(0.0130)	(0.0614)	(0.0137)	(0.0049)
CFOTA	-0.0756	0.5053*	0.0552*	0.4265***
	(0.0744)	(0.2642)	(0.0296)	(0.0372)
ROA	-0.4944***	1.3884***	-0.0337	-0.0934***
	(0.1081)	(0.3479)	(0.0433)	(0.0307)
MTB	0.02***	-0.0107	0.0015	-0.0046***
	(0.0054)	(0.0162)	(0.0035)	(0.0016)
Cons	0.5893***	(0.2159)	-(0.0768)	(0.0054)
	(0.1232)	(0.4486)	(0.0526)	(0.0265)
Industry	Included	Included	Included	Included
Year	Included	Included	Included	Included
1st year regression				
PCTPC_IND	2.6394***	2.5603***	2.3867***	2.7366***
	(0.5953)	(0.5921)	(0.6312)	(0.6141)
UNEMP	1.1724**	1.6181***	1.5875*	1.2031**
	(0.4637)	(0.5719)	(0.8189)	(0.5243)
Cons	-1.4099***	-1.4374***	-1.3321***	-1.4666***
	(0.3132)	(0.3080)	(0.3237)	(0.3208)
Fisher's z (LR)	0.6972**	-0.7657**	-0.7388**	0.5777**
	(0.2846)	(0.3027)	(0.3371)	(0.2309)
Ln Std. Dev	-1.7554***	-0.4416***	-2.247***	-2.9906***
	(0.1126)	(0.0993)	(0.1962)	(0.0788)
Number of obs.	1,585	1,588	1,589	1,550
Wald chi2(26)	206.69***	366.46***	42.74**	238.27***
Wald test of indep. eqns.	6.00**	6.40**	4.80**	6.26**

Notes: Heckman treatment effect regression using maximum likelihood *t*-statistics calculated based on the robust standard errors clustered at firm-level using alternative principal-principal and agent-principal measures. SGA is the sales, general & administrative expenses to total sales ratio, UTIL is the utilisation ratio, total sales to total asset ratio, RND is the research and development intensity ratio, R&D expenses to total sales (in %) and SGFCF is the interaction between firms with low 3-year growth average with free cash flow. PC-FIT is the fitted value of PC variable from the

first stage regression with two instrumental variables (PCTPC_IND and UNEMP). Columns 1,2,3& 4 report regression coefficients and robust standard errors in parentheses. *, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively (two-tailed). Variables definitions are reported in Table 4.1.

The results for these alternative models are shown in Table 4.7. All of the results are consistent with our main hypothesis regarding the role of political connections in reducing firm-level principal-principal and agent-principal conflicts. The results show a statistically significant negative relationship between political connections (PC-FIT) and the alternative measures of agent-principal conflict, SGAREV (at the 5% level) and UTIL (at the 1% level), as well as a statistically significant negative relationship between political connections (PC-FIT) and the alternative measures of principal-principal conflict RND and SGFCF (both significant at the 1% level), supporting our hypothesis and the main regression results that the existence of politically connected boards is associated with lower firms' internal conflicts of interest.

4.6.2 The joint effect of political connections and board strength on firms' internal conflicts of interest

In countries with weak legal shareholder protection, large controlling/dominant shareholders have more ability to divert corporate resources from other shareholders to themselves for personal consumption (Dahya et al., 2008). However, in some cases, the controlling shareholders need to convince these investors and creditors that they will refrain from any expropriation activities of using firm resources for their own benefit (Durnev and Kim, 2005; Dahya et al., 2008). One of the signals that the controlling shareholders can give to convince the investors and/or creditors of their commitment is through the appointment of strong board members, comprising more independent board members and fewer board members with an affiliation to the controlling shareholders (Leung and Horwitz, 2004; Jaggi and Leung, 2007; Dahya et al., 2008; Jaggi et al., 2009; Bhagat and Bolton, 2013; Leung et al., 2014).

The results from the main regressions and the subsequent subsample analysis from Table 4.5 to Table 4.7 seem to suggest that controlling shareholders might resort to using the legal but more secretive other receivables account for dubious related party transactions activities in the face of better corporate governance quality.

If a stronger board – marked by the absence of board members with an affiliation to the controlling shareholders, which also means that the board contains more independent board members – does play an important role in reducing controlling shareholders' expropriation activities, then we would expect a stronger relationship

between political connectedness and principal-principal conflicts of interest for the subsamples of firms without the presence of affiliated board members.

Table 4-8. Regression results for the joint effect of political connections and board strength

	WEAK		STRONG	
	OREC	QFCF	OREC	QFCF
	1	2	3	4
PC-FIT	-0.0149	0.0503***	-0.0682***	-0.0499***
	(0.0185)	(0.0108)	(0.0130)	(0.0194)
TOP 5	-0.0191*	-0.0051	-0.022	-0.0016
	(0.0104)	(0.0092)	(0.0220)	(0.0196)
WEDGE	0.0407*	-0.0034	-0.0122	-0.0113
	(0.0232)	(0.0104)	(0.0096)	(0.0116)
AUD	-0.0047	-0.0009	-0.005	0.0065
	(0.0048)	(0.0030)	(0.0061)	(0.0069)
CG	0.0753*	0.0152	0.0378	-0.0076
	(0.0399)	(0.0186)	(0.0307)	(0.0239)
SIZE	-0.0024*	-0.0021*	0.0009	-0.0045**
	(0.0014)	(0.0013)	(0.0025)	(0.0020)
AGE	0.0099***	0.0002	0.0096	0.0033
	(0.0038)	(0.0033)	(0.0060)	(0.0070)
LEV	0.0152	-0.011	0.0100	0.0107
	(0.0099)	(0.0084)	(0.0187)	(0.0142)
TANG	-0.0129***	-0.0098*	-0.007	-0.0167*
	(0.0047)	(0.0054)	(0.0058)	(0.0087)
OPCYC	-0.0046**	0.0022	0.0074	-0.0012
	(0.0019)	(0.0018)	(0.0051)	(0.0040)
DPR	0.0066	-0.0123**	0.0054	-0.0024
	(0.0082)	(0.0050)	(0.0049)	(0.0071)
CFO	-0.0133	0.366***	-0.0688*	0.3343***
	(0.0134)	(0.0462)	(0.0382)	(0.0589)
ROA	-0.0573***	-0.0747*	-0.0296	-0.1355***
	(0.0212)	(0.0391)	(0.0365)	(0.0370)
MTB	0.0014	-0.0044*	0.0046*	-0.0034**
	(0.0012)	(0.0024)	(0.0026)	(0.0015)
Cons	(0.0224)	-(0.0140)	-(0.0256)	0.0965**
	(0.0242)	(0.0287)	(0.0497)	(0.0428)
Industry	Included	Included	Included	Included
Year	Included	Included	Included	Included
1st year regression				
PCTPC_IND	2.5645***	2.644***	3.1063***	2.9848***
	(0.7496)	(0.7320)	(0.9351)	(1.0955)
UNEMP	1.7392**	1.702**	0.5842**	0.6967
	(0.8775)	(0.7076)	(0.2585)	(0.5736)
Cons	-1.5572***	-1.619***	-1.3508***	-1.2672**
	(0.3868)	(0.3828)	(0.4882)	(0.5771)
Fisher's z (LR)	0.1414	-0.7641***	1.2931***	0.5529*
	(0.4680)	(0.1685)	(0.2052)	(0.2936)
Ln Std. Dev	-3.5664***	-3.0444***	-2.9893***	-3.0473***
	(0.1340)	(0.0801)	(0.1516)	(0.1218)
Number of obs	1060	1046	525	510
Wald chi2(29)	41.21**	114.22	66.82	62.54
Wald test of indep. eqns.	0.09	20.57	39.7	3.55

Notes: Subsamples regressions, dividing the samples into two subsamples according to the presence/absence of familial members of controlling shareholders as board members. Columns 1 &2 report regression coefficients and robust standard

errors in parentheses for firms with the presence of controlling shareholders family members as board member (WEAK). Columns 3 &4 report regression coefficients and robust standard errors in parentheses for firms without the presence of controlling shareholders family members as board member (STRONG). OREC is the measure of principal-principal conflict and QFCF is the measure of agent-principal conflict. PC-FIT is the fitted value of PC variable from the first stage regression with two instrumental variables (PCTPC_IND and UNEMP) and lagged dependent variable. *, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively (two-tailed). Variables definitions are reported in Table 4.1.

Moreover, since management teams with the presence of affiliated board members also tend to align themselves with the controlling shareholders' interests (Kim et al., 2008; Young et al., 2008), we also expect a stronger relationship between political connectedness and agent-principal conflict of interests for the subsamples of firms without the presence of affiliated board members.

The results in Table 4.8 seem to support our expectations and show that that political connectedness is effective in reducing principal-principal conflict and agent-principal conflict only for the strong board subsamples (firms without the presence of affiliated board members) and is not effective in reducing principal-principal conflict and agent-principal conflict for firms with the presence of affiliated board members.

Political connectedness has a negative and statistically significant relationship with the measure of principal-principal conflict (OREC) and the measure of agent-principal conflict (QFCF), and both results are significant at the 1% level for the subsample of firms with a strong board. However, the results in Table 4.8 also suggest that in firms with a weak board, not only is political connectedness not effective in reducing conflicts, it is actually related to a higher level of agent-principal conflict. Political connectedness has a positive and statistically significant relationship with the agent-principal conflict measure (QFCF), with the result significant at the 1% level, for the subsample of firms with a weak board and no statistically significant relationship between political connections and other receivables ratio (OREC).

These results also raise the possibility that while their intentions may not always be harmful, the presence of board members with a familial relationship to the controlling shareholders may undermine the role of independent board members in supervising and advising the management team since it can easily be bypassed or amended by the controlling shareholders (Dahya et al., 2008; Purkayastha et al., 2019).

4.7 Summary and concluding remark

Our analysis of 265 non-financial firms on the Indonesian Stock Exchange during the 2010-2015 period finds a negative and statistically significant relationship between political connectedness and all of our measures of firms' internal conflicts of interest, both for the principal-principal agency conflict measures and the agent-principal agency conflict measures.

The results in this study contribute to the political connections literature by giving evidence showing that when certain requirements are met, political connectedness can become a tool to reduce firms' internal principal-principal and agent-principal conflicts of interest, even with the existence of a high level of ownership concentration and a weak institutional setting.

In a democratic country with freedom of the press, the improvement of the investor protection system via financial institution reform, and the implementation of corporate governance measures that improve corporate governance quality, politically connected board members, mostly appointed as independent non-executive board members, are able to fulfil their mandate to protect minority shareholders' interest and monitor management activities.

The findings from this study provide the basis for international bodies promoting the benefits of a democratic political system as well as regulators in countries experiencing similar problems regarding a high level of ownership concentration and a weak investor protection system.

The results also suggest that political connectedness and corporate governance quality have a complementary, instead of a substitutionary, relationship in Indonesia. The role of political connections in reducing firms' internal conflicts of interest is more effective in firms with a higher corporate governance quality.

Meanwhile, mitigation of the agent-principal agency conflict by increasing corporate governance quality may also have an unwanted effect. A higher corporate governance index score is related to a higher level of the other receivables ratio, indicating the possibility that higher levels of scrutiny and transparency might make the decision-makers inside the firms choose to use the less transparent, less regulated and more opaque other receivables account to avoid detection of any misappropriation.

This study is limited in several ways. The sampling period is limited to 2010-2015 since extensive and detailed corporate governance-related data are mostly unavailable for many firms before the 2010 period, while the collection of detailed data beyond 2015 would stretch the research beyond the maximum time period available for the researcher to complete this study.

The limitation of available data also forces us to use a modified version of the corporate governance index to investigate the effect of a higher level of corporate governance quality on the relationship between political connections and firms' internal conflicts of interest.

Furthermore, while there is enough data on several characteristics of important specific board characteristics such as audit committee education level, there is not enough information to form an accurate variable related to audit committee expertise that may also play an important role in principal-principal conflicts. A similar problem also hampered our ability to tests other specific board and audit-related issues (i.e. audit fees, board remuneration, internal audit, etc). This can probably be explored in the future when more information is available.

CHAPTER 5

THE RELATIONSHIP BETWEEN POLITICAL CONNECTIONS AND EARNINGS MANAGEMENT

5 The relationship between political connections and earnings management

5.1 Introduction

The literature on managers' and politicians' motivation regarding business activities provides two contrasting views: The opportunistic view, which puts the interests of managers (Jensen and Meckling, 1976) and politicians (Krueger, 1974) above all others, and the accountable view, which sees managers (Donaldson and Davis, 1991) and politicians (Lederman et al., 2005; Djankov et al., 2010) as safeguarding a firm's long-term interests.

The evidence from the literature on political connectedness overwhelmingly supports the opportunistic view. It is found that politically connected firms have lower earnings quality (Chaney et al., 2011; Al-dhamari and Ismail, 2015) and a higher level of earnings management activities than non-connected firms (Ding et al., 2007; Chen et al., 2008; Braam et al., 2015; Attia et al., 2016; Chi et al., 2016; Li et al., 2016).

While there is an emerging strand of research on the relationship between political connections and earnings management activities (Chaney et al., 2011; Chi et al., 2016; Li et al., 2016), the limited evidence on this association focuses mainly on the opportunistic rent-seeking behaviour of politicians. Although much emphasis has been put on understanding the opportunistic behaviour of politicians, almost no attention has been devoted to the benefits that may be generated from the governance role of politicians within the firm and how they may act in different settings. Thus, the empirical evidence on the governance role of politicians remains mostly unexplored. This paper seeks to fill that void and extends this nascent line of research by analysing the relationship between political connections and earnings management activities in Indonesia. The main research question in this study, therefore, is whether political connections are valuable in reducing earnings management practices.

Central to the opportunistic behaviour view is the argument that self-interested managers are likely to misuse firm resources to maximise their interest, mostly at the expense of other shareholders (Baker et al., 2003; Graham et al., 2005; Bergstresser and Philippon, 2006). Drawing on such arguments, politicians may attempt to increase their wealth via influencing government policies that would benefit their connected firms (Braun and Raddatz, 2010; Tahoun and van Lent, 2018). In some cases, some businessmen/women may actually enter politics and seek top political positions, such as

country leaders and ministers, to impose regulations and public policies that are favourable to their firms (Bunkanwanicha and Wiwattanakantang, 2009).[22]

However, the literature also suggests that not all managers and politicians act opportunistically. Stewardship theory suggest that some managers aligned their perceived interests with the corporations interest and will act responsibly to protect those interests (Donaldson and Davis, 1991; Davis et al., 1997). This argument grounds on the view that there are trustful, loyal, highly ethical and altruistic managers in many organisations (Donaldson, 1990; Sosik et al., 2009; Haynes et al., 2015). The manager's actions are not always motivated by financial factors and remuneration; some managers are driven by an internal need for achievement and to be successful in what they are doing (Sosik et al., 2009).

Moreover, Haynes et al. (2015) also find that managers act responsibly because while managerial greed leads to the fulfilment of the managers' short-term objectives, the impact of this short-term decision making is harmful to the long-term sustainability of firms and also harmful to the reputations of the managers. Meanwhile, managerial altruism and alignment with firms' interests lead to long-term objectives in the decision-making process, corporate citizenship behaviour and sustainable long-term financial performance.

According to Davis et al. (1997), instead of one theory being wrong and the other theory being right, both agency and stewardship theories are correct and can be applied to analyse different circumstances. Managers have a choice to behave as responsible stewards or opportunistic agents, based on their motivations and perceptions of the firms, while principals can also choose to create a stewardship or an agency relationship with the managers, based on their perceptions of the managers and the situation.

It is also argued that stewardship and opportunistic behaviours are not exclusive to managers of corporations. Some studies suggest that some politicians are "persons of character" who seek public office mainly to serve the public's interest and do not place much focus on their personal benefits (Wittman, 1977; Alesina, 1988; Lederman et al., 2005; Djankov et al., 2010). Political integrity is created as a result of trust between voters and politicians, which theoretically results in the absence of agency problems between government officials and their constituents (Butler et al., 2009).

[22] The authors give several examples such as Tung Chee Hwa (Hong Kong), Thaksin Shinawatra (Thailand), Ferenc Gyurcsany (Hungary), Yulia Tymoshenko (Ukraine), Rafiq Hariri (Lebanon), SilvioBerlusconi (Italy), and Paul Martin (Canada).

Moreover, the literature also suggests several factors that can influence politicians to act more responsibly and avoid rent-seeking activities. These factors are a democratic political system – marked by free, fair and regular elections (Adsera et al., 2003; Lederman et al., 2005; Djankov et al., 2010); freedom of the press (Adsera et al., 2003; Brunetti and Weder, 2003; Lederman et al., 2005; Djankov et al., 2010); higher levels of transparency and disclosure by politicians (Adsera et al., 2003; Djankov et al., 2010); and political accountability, the existence of a checks and balance system that provides punishment for wrong actions by politicians such as corruption and rent-seeking activities (Adsera et al., 2003; Lederman et al., 2005).

A democratic political system ensures that politicians act responsibly since failure to keep campaign promises or involvement in recalcitrant or disconcerting activities would result in a loss of public support and a loss of their political position (Adsera et al., 2003; Djankov et al., 2010). A free press provides the means for society to conduct checks and balances on the politicians' activities and hold them accountable for their actions (Brunetti and Weder, 2003). Higher levels of transparency and disclosure by the politicians enhance the politicians' reputation and reduce the tendency to commit corrupt activities (Adsera et al., 2003; Djankov et al., 2010) since wrongful conduct would result in not only a loss of positions and reputation but also possible prison time (Lederman et al., 2005).

This study expects politically connected firms to have lower earnings management than non-connected firms. This expectation relies on two premises. First, the politicians appointed to be board members in Indonesia's listed firms act responsibly and with integrity to protect their reputation and to ensure themselves of future board positions, either in the same or different firms. There is a market for non-executive board director membership for former politicians in Indonesia, but the vacancy is limited. Dahya et al. (2008) argue that in this situation, the appointed board members have incentives to carry out their tasks honourably and efficiently, avoiding collusion with managers and or controlling shareholders to expropriate firm resources since an inability to perform their duties properly or engage in misconduct would result in the devaluation of the board member's human capital and devoid them from the public respect and future financial remuneration from board membership positions(Fama and Jensen, 1983).[23]

[23] Politically connected board members that abuse their position or have their reputation tainted because of corruption cases lose their position, not only for the current period but also in the future. There are two examples of this situation in our sample: Irman Gusman (2016) and Patrialis Akbar (2016), a former parliament member and a former minister who were indicted for graft cases and are serving jail sentences for their actions.

Second, the majority of connected board members are independent commissioners and are subject to more rigorous selection than non-independent commissioners[24], with additional duties of protecting the interests of shareholders, particularly minority shareholders, besides monitoring managerial activities. Previous studies indicate the important role of independent board members in reducing earnings management activities (Chen and Jaggi, 2001; Dahya et al., 2008; Jaggi et al., 2009; Chen et al., 2015; Liu et al., 2015b).

This study explores the relationship between political connectedness and two types of earnings management activities, namely discretionary accruals and real earnings management activities, as well as putting each measure as a control variable when the other measure is used as the main dependent variable. The reasons for doing this is that there are two different views regarding the relationship between accruals and real earnings management activities for firms. On the one hand, several studies from the previous literature suggest a substitutionary relationship (trade-off) between accruals and real earnings management activities (Enomoto et al., 2015; Choi et al., 2018). On the other hand, other studies suggest a complementary relationship (combination) between accruals and real earnings management activities (Chen et al., 2012a; Hamza and Kortas, 2019).

Indonesia presents a unique setting to examine the relationship between political connections and earnings management activities for two reasons. First, all essential elements required for the success of the accountable behaviour from previous studies, namely the democratic political system with fair and regular elections (Horowitz, 2013); free press (Hanitzsch, 2005; Steele, 2012; Tapsell, 2015), a transparency requirement regarding public officials' wealth and its sources (Indonesian Government, 1999; Schütte, 2011; Rahayuningsih, 2013), and an effective anti-corruption agency (Choi, 2011; Schütte, 2012) currently exist in Indonesia.

Moreover, Indonesian firms have a two-tiered board system, whereby the board of commissioners (BOC) acts as representatives of shareholders, similar to the function of non-executive directors on one-tier boards, while the board of directors (BOD) includes the top management team that runs the firm's day-to-day operations. This separation of duties along with the formation of nomination and remuneration committees is likely to

[24] There are five additional requirements for independent commissioner positions at Indonesian listed firms, which relate to past and present affiliation with the owner of the firms, board members of the firms, or family members of the owner and/or board members of the firms, share ownership, and past or present business relationship with the firms.

curb earnings management activities (La Porta et al., 2000; Claessens, 2006; Laux and Laux, 2009; Djankov et al., 2010; Bezemer et al., 2014).

However, despite the improvement in the institutional setting, Indonesia is still regarded as a country with a relatively weak legal enforcement and investor protection system (Leuz and Oberholzer-Gee, 2006; Enomoto et al., 2015). Similar to most emerging countries, Indonesia has a high ownership concentration (Claessens et al., 2000a; Claessens et al., 2002; Carney and Hamilton-Hart, 2015), giving rise to a potential expropriation of firm resources of minority shareholders by their controlling owners (Morck and Yeung, 2003; Villalonga and Amit, 2006).

Furthermore, in a country with a weak legal enforcement and investor protection system, managers have more incentives to engage in earnings management activities. Managers can either use real earnings management or discretionary accruals earnings management activities as substitutes or use both activities simultaneously without facing scrutiny from the regulatory authority or outside investors (Chen et al., 2012a; Hamza and Kortas, 2019). The combination of a high level of ownership concentration with a weak legal enforcement and investor protection system might increase earnings management activities.

Thus, it is interesting to explore the effects of recent significant reforms in the Indonesian setting on shaping the relationship between political connections and earnings management. This study explores whether these institutional changes will force politicians to work in the best interests of minority shareholders and act as an additional corporate governance mechanism to curb possible opportunistic earnings management activities or whether politicians will submit to large shareholders' and support managerial actions that may not always in the best interest of minority shareholders.

To investigate the relationship between political connections and real earnings management, this study follows Roychowdhury (2006) and uses the abnormal cash flow from operations, abnormal discretionary expenses and abnormal production costs as proxies for real activities earnings management. The three measures are widely used in previous research, such as Cohen et al., (2008) Zang (2012), Kim and Sohn (2013), Achleitner et al. (2014), Braam et al. (2015), Ho et al. (2015) and Abad et al. (2018). Furthermore, following Cohen and Zarowin (2010), Zang (2012), Achleitner et al. (2014) and Braam et al. (2015), we use a composite of the three individual real earnings management proxies to create an aggregate real earnings management measure that captures the overall effect of real activities earnings management as the main measures,

while the three individual measures as well as the absolute value of aggregate real earnings management are used as a robustness check.

Meanwhile, to investigate the relationship between political connections and accruals earnings management, this study uses the model from Kothari et al. (2005) for the main measures. Kothari's model is the latest accruals model and incorporates financial performance in its regression. We also use the Jones (1991) model, the modified Jones model (Dechow et al., 1995) and the absolute value of Kothari's model as a robustness check.

Using a large handpicked dataset from Indonesia over 2010-2015, the results show, consistent with our predictions, a strong and significant relationship between political connections and the reduction of real earnings management activities for all four real earnings management measures.

This study complements prior studies on the accountable behaviour view of political connections (Niessen & Ruenzi, 2010; Amore & Bennedsen, 2013). Although several studies examine the role of political connections in exacerbating opportunistic earnings management, to our knowledge, this is the first study that investigates the value of political connections in reducing this opportunistic behaviour. This study provides evidence that supports the accountable behaviour view that political connectedness in a democratic country with the freedom of the press and an improved disclosure level could act as an additional corporate governance tool that reduces both real and accruals earnings management activities.

Furthermore, this study also suggests a complementary relationship between political connections and corporate governance quality. Political connections are only effective in reducing real earnings management in firms with a higher level of corporate governance quality or in firms that appoint higher-quality auditors (big four public accounting firms). These results are different from previous studies' results, where political connections were assumed to be a substitute for corporate governance quality (Leuz and Oberholzer-Gee, 2006; Chaney et al., 2011; Yeh et al., 2013).

In addition, the hybrid Indonesian corporate governance system combines the characteristics of the market-based system with two-tired boards and the relationship-based system with inferior rights for minority shareholders. This, in turn, makes examining the role of political connections in reducing managerial opportunistic earnings management appealing. As a result, the findings of this study may be relevant not only for Indonesia but also for other countries that share similar institutional characteristics.

The rest of this chapter is organised as follows. Section 5.2 discusses a brief background of Indonesia's institutional settings, while Section 5.3 provides the literature review and hypothesis development. Section 5.4 presents the measurement of the dependent variable and empirical models. Section 5.5 reports the univariate analysis, regression results and analyses. The various decomposition tests and robustness checks that are conducted are summarised in Section 5.6. Finally, Section 5.7 concludes the study.

5.2 Background

Indonesia provides a unique institutional setting in which to test the relationship between political connections and earnings management. On the one hand, Indonesia has witnessed significant political and institutional reforms that have changed the country into a democracy with all necessary elements to hold politicians accountable for any wrongdoing, namely a democratic political system (Horowitz, 2013); free press (Hanitzsch, 2005; Steele, 2012; Tapsell, 2015); civil servants disclosure (Indonesian Government, 1999; Schütte, 2011; Rahayuningsih, 2013); and an effective punishment system for corruption (Choi, 2011; Schütte, 2012).

On the other hand, Indonesia still has a high ownership concentration (Claessens et al., 2000a; Claessens et al., 2002; Carney and Hamilton-Hart, 2015) and is regarded as a country with a relatively lax investor protection system (Leuz and Oberholzer-Gee, 2006; Enomoto et al., 2015). Moreover, there are also contradicting results from previous literature regarding the role of the three major types of controlling shareholders in the Indonesian capital market (family, corporation, and state).[25]

However, there are several other factors in the current Indonesian setting that could tip the balance toward the accountable behaviour of politically connected firms. First, post-reform Indonesia requires high-ranking civil servants and public officials[26] to disclose their wealth before, during and after their appointment as civil servants/public officials (Indonesian Government, 1999) as well as to update their wealth report every two years or after promotion or appointment to other governmental institutions (Corruption Eradication Commission, 2005).

These regulations have helped to elect responsible personnel with a clean track record for high-ranking governmental institutions and ensure a working principle of

[25] Further details regarding these conflicting results are explained in section 4.6.4. of this thesis

[26] This includes the members of the senate (MPR) and parliament (DPR), heads of government institutions, governors, ministers, judges, state-owned enterprise board members, head of the central bank, state university deans, attorneys, first echelon/highest ranking officials in government institutions, military and police institutions, and government project leaders and treasurers.

checks and balances in governmental institutions (Schütte, 2011). In addition, the Indonesian corporate governance manual requires the publicly listed firm to publish transparent annual reports with much corporate governance, ownership, and social responsibility disclosures, putting managers under further public scrutiny (International Finance Corporation and Indonesia Financial Services Authority, 2012).

Second, the corporate governance system in Indonesia adopts a two-tier board system, which is assumed to be more effective in protecting minority shareholders due to the separation of duties between controlling bodies and managing bodies (Jungmann, 2006). Third, the majority of connected board members (78%) in Indonesian listed firms are appointed in the capacity of independent commissioners, which are subjected to more rigorous selection than non-independent commissioners and act as one of the mechanisms to improve the investor protection system.

An independent commissioner must not be a person who works in or has had authority over the firm's operational activities in the last six-month period, unless in the capacity of an incumbent independent commissioner role. The independent commissioner must also not have any shares ownership, directly or indirectly, in the firm in which they wish to hold an independent commissioner position. The independent commissioner must also be free from any type of affiliation with the firm, other members of the board of commissioners, members of the board of directors, or major shareholders of the firm, and the independent commissioner must not have any business relationship, directly or indirectly, with the firm's business or business sector (Indonesia Financial Services Authority, 2014).

The main duties of the independent commissioner are to monitor management activities and to protect the interests of shareholders, especially minority shareholders. Previous studies suggest that a higher level of board independence is associated with a lower level of earnings management activities (Chen and Jaggi, 2001; Dahya et al., 2008; Jaggi et al., 2009; Chen et al., 2015; Liu et al., 2015b). The regulations also limit the number of concurrent board of commissioner memberships a person can have to a maximum of five in the same fiscal year (Indonesia Financial Services Authority, 2014).

Given the substantial economic, political and legal reforms, the disclosure level of politicians, the two-tier board system, and the strict requirements for independent commissioner position, political connections are more likely to be an integral part of the apparatus of a good corporate governance system than against it.

5.3 Literature review and hypothesis development

5.3.1 The relationship between political connections and earnings management

The existence of politically connected firms occurs due to a mutual need between firms and politicians. Firms need politicians to have better access to gain competitive rent-seeking (Krueger, 1974) and to influence policy-making decisions that are favourable for insiders (Hillman, 2005; Dieleman and Sachs, 2008). During a financial crisis or financial troubles, connected firms can also use their political connections to gain loans from a state-owned bank or access a government bailout scheme (Faccio et al., 2006; Blau et al., 2013).

Similarly, politicians need firms to execute some of their populist and grand projects (Borsuk and Chng, 2014). The Chinese government intervenes in investments and employment decisions in connected firms, especially state-owned enterprises, to help the government to accomplish social and political goals, such as employment, fiscal health, regional development, and social stability, at the expense of the firms' operational efficiencies (Chen et al., 2011c). Politicians in Pakistan have used connected firms as a tool to provide employment for their constituents, boosting their popularity by having the connected firms employ more employees than needed for the firm to run efficiently (Saeed et al., 2017).

The opportunistic and accountable behaviours are two conflicting behavioural views concerning the involvement of politicians in a firm and are discussed in the literature. On the one hand, proponents of the opportunistic behaviour view suggest that individuals are motivated by self-interested behaviour to maximise their interests, mainly at the expense of other shareholders (Williamson, 1993). On the other hand, proponents of accountable behaviour suggest that the business world, especially in the globalisation era, requires moral and ethical behaviour for relationships to work (Romar, 2004). Furthermore, governance mechanisms, such as monitoring and incentive schemes, can mitigate harmful opportunistic practices by individuals (Wathne and Heide, 2000).

Moreover, the literature also suggests the importance of a country institutional setting in influencing opportunistic and accountable behaviours. In a less democratic country with a high level of corruption and a weak legal system, political connections become a tool for politicians and firms to extract maximum benefits for themselves via rent-seeking activities that hamper the economic growth of a country (Murphy et al., 1993; Morck and Yeung, 2004; Morck et al., 2005). Meanwhile, in a democratic country with a low level of corruption and a strong legal system, political connections become a tool

for politicians to improve the relationship between firms and the politician's constituents by relaying the needs of the constituents directly to the firms (Niessen and Ruenzi, 2010).

This study focuses on both discretionary accruals and real earnings management measures and uses other measures as control variables to test the substitutionary/complementary relationship between the two earnings management measures. There are two contrasting views regarding the relationship between accruals and real earnings management activities for firms.

On the one hand, several studies suggest a substitutionary relationship between accruals and real earnings management activities. Managers trade one form of earnings management activities for the other, depending on the internal and external factors of the firms. In countries with stronger investor protection and legal protection system, firm management shifts from more detectable accruals earnings management to the more secretive real earnings management activities (Enomoto et al., 2015; Choi et al., 2018). The implementation of more stringent regulations, such as Sarbanes-Oxley (SOX) in the US, can also contribute to the trade-off between accruals and real earnings management activities (Cohen et al., 2008).

The trade-off can also occur in relation to an event such as seasoned equity offerings (SEO), whereby managers engage more in real earnings management activities and reduce accruals earnings management activities in the periods leading up to the SEO (Cohen and Zarowin, 2010; Kothari et al., 2016). Another factor that contributes to the trade-off between accruals and real earnings management is political connectedness. According to Braam et al. (2015), politically connected firms are more likely to substitute accruals earnings management with real earnings management activities to avoid detection and provide more secrecy for the firms.

On the other hand, several studies suggest a complementary relationship between accruals and real earnings management activities, meaning managers simultaneously use both types of earnings management activities. According to Ibrahim et al. (2011), managers in the US capital market actually use both types of earnings management, accruals and real earnings management, concurrently in the period leading up to an SEO, and not substituting accruals earnings management by engaging only in real earnings management activities. Moreover, accruals earnings management and real earnings management are not mutually exclusive strategies and a coordinated approach using both types of earnings management activities can help managers to achieve their earnings targets more effectively (Chen et al., 2012a).

Furthermore, the assumption of a trade-off between accruals and real earnings management in relation to a stronger legal system and investor protection system suggests a higher level of disclosure, scrutiny and monitoring in terms of managers' activities that limit the options of earnings management activities for managers. However, in countries with a weak investor protection and legal system, there should be more incentives for managers to engage in both accruals and real earnings management activities without the shackles of a disclosure, scrutiny and monitoring system (Chen et al., 2012a; Hamza and Kortas, 2019). As a result, managers in countries with a weak investor protection and legal system have more incentives and relatively little restriction to use both types of earnings management concurrently (Chen et al., 2012a; Hamza and Kortas, 2019) or to substitute accruals with real earnings management activities when it gives more benefits, such as tax savings (Hamza and Kortas, 2019).

According to Chaney et al. (2011), there are two possible outcomes of the relationship between political connectedness and earnings management activities based on the opportunistic and accountable behaviours. Political connections may be associated with better earnings quality and a lower level of earnings management activities when connected firms are subject to extensive controls, monitoring and public scrutiny, which leads to accountable behaviours for politically connected firms. On the other hand, political connections may be associated with poorer earnings quality and a higher level of earnings management activities when connected firms need to obscure the benefits gained from political connectedness to continue enjoying those benefits.

Despite the existence of two contrasting behavioural views, the literature on the relationship between political connectedness and earnings management thus far only provides evidence to support the opportunistic behaviour view. The impact of having political connections on firm performance is greater in countries with a weak legal system and a high level of corruption (Faccio, 2006; Chen et al., 2010; Faccio, 2010). Political connectedness enables firms to enjoy a lower cost of debt (Chaney et al., 2011) and cost of equity (Boubakri et al., 2012b) despite having a lower level of earnings quality.

However, there is at least one study, as far as our knowledge, that provides a result to support the accountable behaviour view. According to Bona-Sanchez et al. (2014), even in a country with a weak legal protection system and a high level of ownership concentration such as Spain, politically connected board members, together with controlling shareholders, can act as stewards of the firms and increase the earnings quality of connected firms, subject to a higher level of disclosure and transparency by the connected firms.

This study aims to fill a gap in the previous literature by examining the effect of political connections on earnings management activities, using both real and accruals earnings management measures for the case of Indonesia. Indonesia provides a unique institutional setting to test the relationship between political connections and earnings management. On the one hand, Indonesia has witnessed significant political and institutional reforms that changed the country into a democracy with all necessary elements to hold politicians accountable for any wrongdoing, namely a democratic political system (Horowitz, 2013); free press (Hanitzsch, 2005; Steele, 2012; Tapsell, 2015); civil servants disclosure (Indonesian Government, 1999; Schütte, 2011; Rahayuningsih, 2013); and ab effective punishment system for corruption (Choi, 2011; Schütte, 2012). On the other hand, Indonesia still has a high ownership concentration (Claessens et al., 2000a; Claessens et al., 2002; Carney and Hamilton-Hart, 2015) and is regarded as a country with a relatively lax investor protection system (Leuz and Oberholzer-Gee, 2006; Enomoto et al., 2015).

However, this study expects that the appointment of politically connected board members for listed firms in Indonesia is likely to reduce earnings management activities for several reasons. First, in many developed or developing countries, the appointed politically connected board members are active/incumbent presidents (Schoenherr, 2019), prime ministers (Bunkanwanicha and Wiwattanakantang, 2009; Saeed et al., 2017), members of parliament (Pham, 2019) or government officials (Fan et al., 2007; Pan and Tian, 2017), who have considerable power and significant influence on government decision-making policies and resource allocations.

However, in Indonesia, appointed politically connected board are former politicians, similar to the situations in Spain (Bona-Sanchez et al., 2014) and United Kingdom (González-Bailon et al., 2013). In those two countries, firms recruit these former politicians/civil servants not to get preferential treatment from the government or easier access to lending, but for their unique attributes or resources acquired from their service in politics and/or government, which includes prestige, reputation, knowledge of government and business, connections and technical expertise (González-Bailon et al., 2013; Bona-Sanchez et al., 2014). Moreover, shareholders act as good stewards and that hope the appointment of politically connected board member not only increases the firm's reputation, but also increase its earnings quality due to responsible behaviour of the connected board members (Bona-Sanchez et al., 2014).

Second, the corporate governance system in Indonesia adopts a two-tier board system, which is assumed to be more effective in protecting minority shareholders due to

the separation of duties between controlling bodies and managing bodies (Jungmann, 2006). In Indonesia, all political board members serve on the non-executive controlling bodies (board of commissioner), and the majority of them are appointed as independent commissioners, which emphasises the duties of protecting minority interests even more (Indonesia Financial Services Authority, 2014).

Third, there are limited positions available for connected board membership. Good performance and a stellar reputation increase the number of directorships gained to the maximum number allowed and guarantee a substantial financial reward for the connected board members, while failure to perform and entanglement with corrupt activities lead to embarrassment, dishonour and a loss of future financial rewards. These situations give more incentives for politically board members to act honourably and accountably in performing their duties (Dahya et al., 2008).

Based on these arguments, we develop the corresponding testable hypothesis:

Hypothesis 1*: Political connectedness is negatively related to earnings management activities.*

5.3.2 The joint effect of political connections and corporate governance quality on reducing earnings management

Previous studies suggested a substitutionary relationship between political connections and corporate governance quality regarding firms' earnings management activities. Theoretically, political connectedness should be associated with better earnings quality when there is a good corporate governance mechanism, such as higher levels of disclosure and transparency, A proper control and monitoring process from investors and/or the public, along with public scrutiny towards connected firms (Chaney et al., 2011). However, most results from previous studies seem to suggest that was not what has happened in many cases. Politically connected firms actually have poorer earnings quality, especially in countries with a weak investor protection system and high level of corruption (Leuz and Oberholzer-Gee, 2006; Faccio, 2010; Chaney et al., 2011; Boubakri et al., 2012b), supporting the opportunistic behavioural view.

The low level of earnings quality and corporate governance quality of politically connected firms in these situations is influenced by several factors. First, firms need to maintain secrecy in relation to the benefits and costs related to political connectedness. The benefits politically connected firms get from their connections may not be entirely legal, as well as the kickback payments are given to politicians in return for these benefits

(Morck et al., 2005; Leuz and Oberholzer-Gee, 2006; Braam et al., 2015). Both the benefits and the payment need to be obscured and hidden from public knowledge to enable the continuation of the benefits (Braam et al., 2015). Second, the status as a politically connected firm eradicates the requirements for good corporate governance. The consequences of having poor earnings quality, such as a higher cost of debt or a higher cost of equity, only happen to non-connected firms. Politically connected firms to still receive favourable treatment from investors (Chaney et al., 2011) and creditors (Faccio, 2010; Boubakri et al., 2012b) despite their poor corporate governance quality.

While most studies show results that support the opportunistic behavioural view on the joint effect of political connections and corporate governance quality in reducing earnings quality, there is one study that provides evidence to support the accountable behaviour (stewardship theory) view. Bona-Sanchez et al. (2014) argue that while political connections can be related to lower earnings quality, increased transparency and a better corporate governance system changes the behaviour of controlling shareholders and makes the appointment of politically connected board members a tool to improve firms' earnings quality as well as enhancing the firms' reputation.

There are various corporate governance tools and mechanisms that can be used by the firm to reduce earnings management activities and improve earnings quality, such as the appointment of independent board members (Dahya et al., 2008; Jaggi et al., 2009; Setia-Atmaja et al., 2011; Chen et al., 2015; Khalil and Ozkan, 2016), the adoption of a two-tier board system through regulations or shareholders' decision (Jungmann, 2006; Bezemer et al., 2014), the appointment of a higher quality external auditor (Becker et al., 1998; Krishnan, 2003; Fan and Wong, 2005; Khalil and Ozkan, 2016), the appointment of an audit committee with substantial expertise (Klein, 2002; Xie et al., 2003; Bédard et al., 2004; Mangena and Pike, 2005; Zaman et al., 2011; Badolato et al., 2014; Cho and Song, 2017), and a higher level of disclosure (Leuz et al., 2003; Francis and Wang, 2008; Bona-Sanchez et al., 2014).

The adoption of a two-tier board as a mandatory regulation in the Indonesian corporate governance system is based on the acknowledgement by the regulating bodies that created the manual regarding concentrated ownership, little separation of ownership and control, unwieldy holding structures, such as a pyramidal ownership structure, and the inexperienced and inadequate corporate bodies in Indonesia (International Finance Corporation and Indonesia Financial Services Authority, 2012, 51-52).

In Indonesia, although the appointment of politically connected board members is highly influenced by the controlling shareholders, most of the connected board members

(78%) in our sample were appointed as independent commissioners (non-executive director). The main duties of the independent commissioners are to monitor management activities and to protect the interests of shareholders, especially minority shareholders. Previous studies suggest that a higher level of board independence is associated with a lower level of earnings management activities (Chen and Jaggi, 2001; Dahya et al., 2008; Jaggi et al., 2009; Chen et al., 2015; Liu et al., 2015b).

If the appointment of politically connected board members is related to an improvement of corporate governance within the firm, one should expect a complementary role between political connections and corporate governance quality to reduce earning management. Based on these arguments, the corresponding testable hypothesis is:

Hypothesis 2*: The negative relationship between political connectedness and earnings management is more pronounced in firms with better corporate governance quality.*

5.3.3 The joint effect of political connections and audit quality on reducing real earnings management

Although auditor quality is one of the corporate governance mechanisms used to improve the corporate governance quality of a firm, there is a subtle distinction between auditor quality and other corporate governance mechanisms. While most of the corporate governance mechanisms relate to process and activities inside the firm, such as board-related corporate governance measures (Anderson et al., 2004; Ahmed et al., 2006; Firth et al., 2007; Bezemer et al., 2014) and the implementation of internal control and a proper monitoring system (Prawitt et al., 2009; Cheng et al., 2013b; Wang et al., 2018), the audit quality measure involves the appointment of external parties (external auditors) which supposedly have an influence on firms' earnings management activities.

According to Becker et al. (1998), the external auditing process, which allows outsiders (public accounting firms) to verify the validity of financial statements, reduces the information asymmetry between insiders and outsiders of the firms. The external auditor is tasked with ensuring that firm management follows the application of proper accounting policies (Francis and Wang, 2008). The effectiveness of external auditing and its ability to constrain earnings management activities is contingent upon the quality of the public accounting firms (Teoh and Wong, 1993; Becker et al., 1998; Francis and Wang, 2008; Choi et al., 2018) as well as the legal and investor protection system (Francis and Wang, 2008; Choi et al., 2018).

The big four public accounting firms (Ernst & Young/EY, Pricewaterhouse Coopers/PWC, Deloitte Touche Tohmatsu/DTT, and Klynveld Peat Marwick Goerdeler/KPMG) are assumed to provide higher external auditing quality due to their size and global presence (Teoh and Wong, 1993), which also lead to a better capability to detect questionable accounting practices by the management of firms (Becker et al., 1998), a greater need to protect their reputation and to avoid litigation cases due to failure to detect manipulation (Francis and Wang, 2008), and a better bargaining position from which to conduct the auditing process independently and diligently (Carcello et al., 2002).

The literature also suggests that in some cases, the effectiveness of the big four public accounting firms in reducing earnings management activities is also influenced by a country's legal and investor protection system. However, there are conflicting results regarding the effect of a high-quality auditor and a country legal and investor protection system on earnings management activities. On the one hand, some studies suggest that the appointment of big four public accounting firms is only effective in reducing earnings management activities in countries with a strong legal and investor protection system. There are no significant differences in earnings management activities between firms with big four and non-big four public accounting firms in countries with a weak legal and investor protection system (Francis and Wang, 2008; Choi et al., 2018).

On the other hand, there are also studies that the appointment of high-quality auditors in countries with a weak legal and investor protection system can become a tool of a corporate governance mechanism and have a significant effect on reducing conflicts between managers and shareholders (Fan and Wong, 2005).

So far, studies that explore the joint effect between political connectedness and auditor quality on earnings management activities seem to support the view that high-quality auditors and political connectedness do have a significant influence on earnings management activities in countries with a weak legal and investor protection system. According to Guedhami et al. (2014), politically connected firms that appoint high-quality external auditors (big four public accounting firms) are associated with a lower level of earnings management, a higher level of transparency, a higher market valuation and a lower cost of debt. They also find that these relationships are stronger for firms in weak legal and investor protection systems. This assumption is somewhat supported by Habib et al. (2017b), who suggest that politically connected firms that engage in opportunistic earnings management activities are reluctant to appoint high-quality external auditors. Based on these arguments, the corresponding testable hypothesis is:

Hypothesis 3*: The negative relationship between political connectedness and earnings management is more pronounced in firms with a higher audit quality (big four public accounting firms)*

5.4 Research design

5.4.1 Measurement of real earnings management

To measure real earnings management, this study uses a composite measure of real earnings management (AGGREM) that has been used in several other studies (e.g., Cohen et al. (2008); Cohen & Zarowin (2010); Achleitner et al. (2014) Braam et al. (2015). The composite model is developed from individual real earnings management measures models developed by Roychowdhury (2006), and it measures abnormal cash flow from operations (*ABNCFO*), abnormal discretionary expenses (*ABNDISEXP*) and abnormal production costs (*ABNPROD*).

The three individual real earnings management measures represent three different manipulation activities: sales manipulation through increased price discount, whereby lenient credit terms or accelerating the timing of sales lead to a lower level of cash flow from operations; the reduction of research and development (R&D) expenses and delaying new project investments, which lead to a lower level of discretionary expenses; and overproduction to reduce the cost of goods sold, which leads to abundant inventory and a higher level of production costs (Roychowdhury, 2006).

The management of the firms may use the combination of those real earnings management activities or engage in just one or a couple of them. Using an aggregate measure enables us to capture the overall effects of these activities in a comprehensive measure (Cohen et al., 2008). However, we are also aware that different individual real earnings management measures may have different implications that can weaken the aggregate measure's results (Cohen et al., 2008). As such, we are also using the individual real earnings management measures as a robustness check.

1.1.1.3. Abnormal levels of cash flow from operations

The manipulation of current period earnings can be achieved by reducing prices (or extending more lenient credit terms) towards the end of the year to accelerate sales from the next fiscal year into the current year, thus increasing current period earnings. But the effect of this activity is sacrificing future profits for the current period. The potential costs of this real action include a loss of future profitability once the normal prices are re-established, causing lower cash flows per dollar of sales in the current period. Thus, a

lower value of discretionary cash flows from operations (CFO) is interpreted as evidence of earnings-increasing real activities earnings management.

We first generate the normal levels of CFO using the model developed by (Roychowdhury, 2006). We express normal CFO as a linear function of sales and estimate this model, and we run the following regression for each year and industry sectors:

$$CFO_{i,t}/TA_{i,t-1} = \alpha_1\left(1/TA_{i,t-1}\right) + \alpha_2\left(Sales_{i,t}/TA_{i,t-1}\right) + \alpha_3\left(\Delta Sales_{i,t}/TA_{i,t-1}\right) + \varepsilon_{i,t} \quad (5.1)$$

where *CFO* denotes cash flow from operations; *TA* is the total assets; *Sales* is the sales revenue, and *ΔSales* is the change in sales revenue from year *t* to year *t-1*. Abnormal CFO (ABNCFO) is the difference between actual CFO minus the normal level of CFO estimated coefficient calculated from Equation 5.1. Lower values of abnormal *CFO* indicate more real earnings management.

1.1.1.4. Abnormal levels of discretionary expenses

Managers can also use discretionary expenses to increase the current period earnings by decreasing non-operating expenses, such as advertising expenses, research and development (R&D) expenses, and selling, general and administrative (SG&A) expenses. The potential effect of reducing discretionary expenses is the potential loss of future earnings. Thus, reducing discretionary expenses in the current period can be interpreted as earnings-increasing real earnings management.

Following Roychowdury (2006), the model for abnormal levels of discretionary expenses (DISEXP) is a function of lagged sales instead of current sales, because if a manager decides to inflate sales to increase reported earnings in a given year, a firm could exhibit unusually low residuals in that year, even when they do not reduce discretionary expenses.

The normal level of discretionary expenses (DISEXP) is estimated from the following ordinary least squares (OLS) model:

$$DISEXP_{i,t}/TA_{i,t-1} = \alpha_1\left(1/TA_{i,t-1}\right) + \alpha_2\left(Sales_{i,t-1}/TA_{i,t-1}\right) + \varepsilon_{i,t} \quad (5.2)$$

where *DISEXP* denotes discretionary expenses and the other variables are as defined above. Abnormal DISEXP (ABNDISEXP) is the difference between actual DISEXP minus the normal level of DISEXP estimated coefficient calculated from Equation 4.2. Lower values of abnormal discretionary expenses imply more real earnings management.

1.1.1.5. Abnormal levels of production costs

Managers can increase earnings in the current period by reducing the cost of goods sold (COGS) expense through overproduction. However, since the increase in total production costs is not offset by a proportional increase in sales, the redundant product could become a problem for future periods. Thus, high abnormal production costs are interpreted as evidence of more real earnings management. Following Roychowdhury (2006), we measure production costs (PROD) as the sum of the cost of goods sold (COGS) and inventory growth (ΔINV). Then, an estimation of the normal level of production costs is derived from the following ordinary least squares (OLS) model:

$$PROD_{i,t}/TA_{i,t-1} = \alpha_1\left(1/TA_{i,t-1}\right) + \alpha_2\left(Sales_{i,t}/TA_{i,t-1}\right) + \alpha_3\left(\Delta Sales_{i,t}/TA_{i,t-1}\right) + \alpha_4\left(\Delta Sales_{i,t-1}/TA_{i,t-1}\right) + \varepsilon_{i,t} \quad (5.3)$$

where *PROD* is production costs, defined as the sum of costs of goods sold (COGS) and the change in inventories, inventory level in year *t* minus inventory level in year *t-1* (*ΔINV*), and the other variables are as defined above. *TA* is total assets, *Sales* is sales revenue, and *ΔSales* is the change in sales revenue from year *t* to year *t-1*. Abnormal PROD (ABNPROD) is the difference between actual PROD minus the normal level of PROD estimated coefficient calculated from Equation 5.3. Higher values of abnormal production imply more real earnings management.

1.1.1.6. Aggregate measure of real earnings management

Following previous studies (e.g., Cohen et al., (2008); Cohen & Zarowin, (2010); Achleitner et al., (2014); and Braam et al. (2015)), we construct a composite measure (*AGGREM*) to capture overall real activities earnings management and account for the circumstance that firms manage earnings upward using one or more real earnings management actions.

This composite measure (*AGGREM)* is constructed by calculating the sum of the abnormal operating cash flow (*ABNCFO*) and abnormal discretionary expenses (*ABNDISEXP*) and abnormal production costs (*ABNPROD*). For consistency and easier interpretation of results, the variables *ABNCFO* and *ABNDISEXP* are multiplied by negative one. Thus, the composite real earnings management measure is as follows:

$$AGGREM = (-ABNCFO - ABNDISEXP + ABNPROD) \quad (5.4)$$

We interpret greater values of *AGGREM* as evidence of higher levels of real earnings management.

5.4.2 Measurement of accruals earnings management

To measure accruals earnings management, this study uses the measurement model originally developed by Jones (1991), modified by Dechow et al. (1995), and further developed by Kothari et al. (2005). While we use the latest model (Kothari et al., 2005), the results are also similar when the previous models, namely the modified Jones model (Dechow et al., 1995) and the original Jones model (Jones, 1991), are used. The results using the Jones and modified Jones models are used as a robustness check in this study.

The model is estimated at the industry-year level as follows:

$$TAC_{i,t}/TA_{i,t-1} = \alpha_1\left[1/TA_{i,t-1}\right] + \alpha_2\left[(\Delta Sales_{i,t} - \Delta REC_{i,t})/TA_{i,t-1}\right] + \alpha_3\left[GPPE_{i,t}/TA_{i,t-1}\right] + \alpha_4 ROA_{i,t} + \varepsilon_{i,t} \quad (5.5)$$

where *TAC* denotes total accruals, calculated as net income before extraordinary items (*NIBE*) minus cash flow from operating activities (*CFO*); *TA* is the total assets; *ΔSales* is the change in sales revenue from year *t* to year *t-1*; ΔREC is the change in account receivables from year *t* to year *t-1*; *GPPE* is gross property, plant and equipment; and *ROA* is the return on assets, measured as net income divided by total assets.

The normal level of accruals (ACR) is estimated from Equation 5.5. Abnormal Accruals (AEM) is the difference between actual ACR minus the normal level of ACR calculated estimated coefficient from Equation 5.5. Higher values of abnormal accruals imply a higher level of accruals earnings management.

The selection of Kothari's model (Kothari et al., 2005) over previous models is based on several reasons. First, Kothari's model is the latest and most improved model. Second, Kothari's model incorporates a performance-matched discretionary-accrual approach that has the possibility of enhancing the reliability of inferences from the results regarding accruals earnings management activities (Kothari et al., 2005).

5.4.3 Empirical model

To test the relationship between political connections and real earnings management with accruals earnings management as the control variable, we use the following specification:

$$\begin{aligned} REM_{it} = {} & \beta_0 + \beta_1 PC_{it} + \beta_2 AEM_{it} + \beta_3 TOP5_{it} + \beta_{34} AUD_{it} + \beta_5 CG_{it} + \\ & \beta_6 SIZE_{it} + \beta_7 AGE_{it} + \beta_8 LEV_{it} + \beta_9 TANG_{it} + \beta_{10} CASHHOLD_{it} + \\ & \beta_{11} ASYM_{it} + \beta_{12} GROWTH_{it} + \beta_{13} ROA_{it} + \beta_{14} OPCYC_{it} + \beta_{13} LOSS_{it} + \\ & \sum YEAR_t + \sum INDUSTRY_i + \varepsilon_{i,t} \end{aligned} \quad (5.6)$$

To test the relationship between political connections and accruals earnings management with real earnings management as the control variable, we use the following specification:

$$AEM_{it} = \beta_0 + \beta_1 PC_{it} + \beta_2 REM_{it} + \beta_3 TOP5_{it} + \beta_{34} AUD_{it} + \beta_5 CG_{it} + \beta_6 SIZE_{it} + \beta_7 AGE_{it} + \beta_8 LEV_{it} + \beta_9 TANG_{it} + \beta_{10} CASHHOLD_{it} + \beta_{11} ASYM_{it} + \beta_{12} GROWTH_{it} + \beta_{13} ROA_{it} + \beta_{14} OPCYC_{it} + \beta_{13} LOSS_{it} + \sum YEAR_t + \sum INDUSTRY_i + \varepsilon_{i,t} \quad (5.7)$$

where *REM* and *AEM* represent the two measures of earnings management activities, namely real earnings management (*REM*) and accruals earnings management (*AEM*).

PC is an indicator variable coded 1 if the firm has political connections, and 0 otherwise. There are many ways to define political connections from the literature. Fisman (2001) and Johnson and Mitton (2003) define political connectedness as a situation when a business is owned by people with close connections to political power and the value of the firm is affected by these connections. Meanwhile, Faccio (2006) identify a firm as a politically connected firms if at least one of its large shareholders (shareholders with at least 10% of voting shares), or one of its board members is a current/former member of parliament, current/former ministers or having a close relationship to top politicians or political party.

This study follows Faccio (2006) definition to identify politically connected firms. Firms are categorised as politically connected (PC) if at least one large shareholder (controlling at least 10% of the votes directly or indirectly) or its board member (BOC/BOD) is a current/former Member of Parliament, a current/former minister, current/former high-ranking government officials, or having a close relationship to top politicians or political party.

This study expects a negative relationship between *PC* and both measures of earnings management. In other words, we expect politically connected firms to have a lower level of real and accruals earnings management than non-connected firms.

We include several firm-specific characteristics control variables that are used in the prior earnings management literature. Previous studies suggest that larger firms are less likely to manage earnings than smaller firms (Klein, 2002; Siregar and Utama, 2008; Kim and Sohn, 2013; Khalil and Simon, 2014; Khalil and Ozkan, 2016) since large firms are exposed to higher public pressure, are expected to be better managed, and enjoy economies of scale in monitoring opportunistic managerial behaviour (Himmelberg et al.,

1999; Chen and Yur-Austin, 2007). Firm size, *SIZE*, is measured as the natural logarithm of total assets expressed in Indonesian Rupiahs.

It is found that older firms are viewed as being relatively more stable and engage less in earnings management activities than younger firms (La Porta et al., 1999; Morck and Yeung, 2003; Stubben, 2010). Firm age, *AGE*, is measured as the natural logarithm of firm age, the number of years since the firm establishment.

Firms with a higher level of leverage are more prone to financial distress (Ho et al., 2016) and greater conflicts between debtholders and shareholders, which in turn increases earnings management. To control for the possibility that managers may inflate earnings to avoid debt covenant violation (see, e.g., DeFond & Jiambalvo 1994; and Sweeney, 1994) we include leverage, *LEV*, defined as the ratio of total debts to total assets, in the analysis.

Previous studies suggest that firms with a higher asset tangibility ratio are less likely to manage earnings than firms with a lower asset tangibility ratio (Lev, 1983; Baginski et al., 1999; Leuz et al., 2003; Francis et al., 2004; Perotti and Wagenhofer, 2014). Asset tangibility, *TANG*, is measured as the ratio of gross property, plant and equipment divided by total assets.

A large amount of cash-on-hand is related to poor earnings quality and potentially higher level of earnings management activities (Kalcheva and Lins, 2007; Sun et al., 2012). We measure cash holding, *CASHHOLD*, as the ratio of cash and cash equivalent divided by total assets.

Managers may attempt to conceal the true nature of firms' fundamental performance, resulting in a higher level of information asymmetry between managers and investors, by engaging in earnings management activities (Venkatesh and Chiang, 1986; Yohn, 1998; Richardson, 2000; Bhattacharya et al., 2011; Bhattacharya et al., 2013). Higher information asymmetry is, therefore, expected to be associated with a higher level of earnings management (Abad et al., 2018). Information asymmetry, *ASYM*, is measured as the bid-ask spread ratio [(ask price-bid price)/((ask price + bid price)/2)], based on the daily closing bid and ask price for a one-year period (Venkatesh and Chiang, 1986; Chung et al., 1995).

As prior studies suggest, firms with a higher level of current revenue growth are less likely to manage earnings than firms with a lower level of current revenue growth because managers of firms with lower revenue growth are under more pressure to report achievement of growth targets than managers of firms with higher revenue growth, which may already achieve their growth level target without earnings management activities

(Dechow and Skinner, 2000). Current revenue growth, *GROWTH*, is measured as the annual sales growth, defined as the current period annual sales minus the last period annual sales divided by the last period annual sales revenue.

Previous studies also suggest that earnings management activities will affect firm profitability. Managers may engage in earnings management activities to achieve current period earnings targets, thereby receiving a bonus for this achievement, regardless of the effect of these manipulations on the firms' long-term performance sustainability (Graham et al., 2005). As a result of these earnings management activities, the current period profit may increase (Louis, 2004; Ayers et al., 2006; Francis and Wang, 2008). Profitability, *ROA*, is measured as net income divided by total assets.[27]

Since real activities earnings management involves changes to the operational activities, the result can be redundant inventory, which reduces the operating efficiency and slows the operating cycle period (Francis et al., 2004; Chaney et al., 2011; Perotti and Wagenhofer, 2014). To capture this effect, we use operating efficiency, *OPCYC*, measured as the natural logarithm of the operating cycle (i.e., days account receivable + days inventory).

The final control variable is loss reporting in the previous year (LOSS). The prior literature suggests that the earnings management activities are also influenced by whether the firm is making a profit or a loss. Managers and controlling owners who have more incentives to manage reported earnings can use their financial reporting discretion to overstate earnings and conceal unfavourable earnings realizations (i.e. loss) that would prompt outsider interference (Leuz et al., 2003; Phillips et al., 2003). Because of that, firms that report negative net income (losses) are less likely to engage in earnings management activities (Leuz et al., 2003; Perotti and Wagenhofer, 2014; Choi et al., 2018). Loss reporting indicator, LOSS, is a dummy variable with the value of 1 if firms are reporting loss (negative net income) in the current year reporting period and 0 otherwise.[28]

This study also includes several corporate governance variables. The measures are corporate governance quality (CG) and auditor quality (AUD). To measure corporate governance quality, this study uses the corporate governance index modified from the

[27] We use current period ROA instead of lag one-year period ROA. While we are aware that there are some studies which suggest that the dependent variables, REM and AEM may be a component of contemporaneous profitability or loss (Choi et al., 2018), there are more studies in favour of using current period control variables (Francis et al., 2008; Francis and Wang, 2008; Achleitner et al., 2014; Braam et al., 2015). Moreover, while there are some differences, robustness tests show that using contemporaneous instead lag control variables does not qualitatively alter our overall results.

[28] The arguments for using the current LOSS period are similar with the current period ROA.

2017 Good Governance Report (Institute of Directors, 2017). The index consists of five governance segments, namely board effectiveness, audit and risk, remuneration and reward, shareholder relations, and stakeholder relations, which are further classified into 38 items that are available in our research.

While we are aware of the existence of several corporate governance indexes, such as the G-index (Gompers et al., 2003), Gov-score (Brown and Caylor, 2006) and Corporate Governance Quotient/CGQ (Ertugrul and Hegde, 2009), in comparing available data in the Indonesian setting, we choose to use the modification of Institute of Directors index. This index offers the best option in relation to the availability of data for our sample as well as the broadness of the corporate governance types coverage.

The full list and the justification for each metric are provided in Appendix 1. The corporate governance index score range is between 0 (lowest corporate governance quality) and 1 (highest corporate governance quality). A higher level of corporate governance quality is expected to be associated with a lower level of earnings management (Chen et al., 2007; Liu and Lu, 2007; García-Meca and Sánchez-Ballesta, 2009).

The second corporate governance variable is auditor quality (AUD). Teoh and Wang (1993) suggest that auditor reputation also adds credibility to the earnings reports of the firms they audit. Previous research supports this conjecture and finds that high-quality auditors (i.e., big four auditing firms) reduce the likelihood of earnings management practices by firms (Becker, DeFond, Jiambalvo, (1998) Gul, Lynn and Tsui, (2002); Chang and Sun, (2010) Khalil and Ozkan, (2016). Audit quality, AUD, is measured as a dummy variable with the value 1 for firms that use the service of one of the big four public accounting firms (EY, PwC, KPMG or DTT), and 0 otherwise (Guedhami et al., 2014)

We also add ownership concentration as a control variable. Ownership concentration, (TOP5_OWN) measured as the percentage of shareholding by the largest five shareholders, is also added to the model (Fan and Wong, 2002; Leuz et al., 2003; Firth et al., 2007). We expect a positive relationship between the level of ownership concentration and earnings management activities measures since firms with a higher level of ownership distributed among fewer major shareholders are likely to be associated with a higher level of minority interest expropriation and, in turn, higher earnings manipulation (Claessens et al., 2000a; Villalonga and Amit, 2006; Jiang et al., 2010; Su et al., 2014). Finally, the subscript i indexes industries sectors and t indexes years (t = 2010–2015). All variables' definitions are reported in Table 5.1.

Table 5-1. Variables definition

Variable	Description	Source
REM	Real Earnings Management; The aggregate measure of three individual real earnings management measure (-ABNCFO-ABNDISEXP+ABNPROD)	Equation 4.4
AEM	Accruals Earnings Management. The measure of accruals earnings management activities using Kothari model	Equation 4.5
PC	Dummy variable with the value of 1 if the firm has political connections, and 0 otherwise	Annual Report
TOP5_OWN	Percentage of shareholding by five biggest shareholders	Annual Report & Capital IQ
AUD	Dummy variable with the value of 1 if the firm is audited by one of the Big 4, and 0 otherwise	Annual Report
CG	Corporate Governance Quality Index, continuous variable ranging from 0-1 based on the corporate governance quality index measures	Modified from Institute of Directors 2017 Corporate Governance Index (2017)
SIZE	Natural logarithm of sales	Bloomberg
AGE	Number of years since the legal foundation of the firm	Bloomberg
LEV	Total debt scaled by total assets	Bloomberg
TANG	Net property, plant and equipment after depreciation scaled by total assets	Bloomberg
CASHHOLD	Cash holding ratio, cash & equivalent scaled by total assets	Bloomberg
ASYM	The average bid-ask spread ratios based on daily trading data for a one-year period	Bloomberg
ROA	Net income scaled by total assets	Bloomberg
GROWTH	Current period annual sales revenue minus last period annual sales revenue scaled by last period annual sales revenue.	Bloomberg
OPCYC	Natural logarithm of the operating cycle (days account receivable + days inventory)	Bloomberg
LOSS	Dummy variable with the value of 1 if the firm is experiencing a loss (negative net income) in the current year period financial reporting, and 0 otherwise	Annual Report

Table 5-2. Descriptive statistics

	Mean			Sig	Median			Sig	Standard Deviation			Observations		
Variable	Full	PC	Non-PC		Full	PC	Non-PC		Full	PC	Non-PC	Full	PC	Non-PC
REM	0.0078	-0.0018	0.0178		0.0391	0.0423	0.0353		0.3790	0.3642	0.3938	1,586	808	778
AEM	-0.0003	-0.0026	0.0021		-0.0008	-0.0028	0.0013		0.0836	0.0813	0.0858	1,584	807	777
TOP5_OWN	0.7211	0.7063	0.7363	***	0.7394	0.7259	0.7500	***	0.1731	0.1731	0.1719	1,590	809	781
AUD	0.3987	0.4648	0.3303	***	0.0000	0.0000	0.0000	***	0.4990	0.4991	0.4706	1,590	809	781
CG	0.4532	0.4897	0.4154	***	0.4155	0.4564	0.3838	***	0.1191	0.1289	0.0942	1,590	809	781
SIZE	7.8799	12.2000	3.4328	***	2.2053	5.1764	0.9779	***	17.9000	23.1000	8.0160	1,590	809	781
AGE	32.3189	34.0359	30.5403	***	30.0000	29.0000	31.0000		19.5994	23.5643	14.1818	1,590	809	781
LEV	0.4697	0.4839	0.4550	***	0.4727	0.4883	0.4613	***	0.2025	0.1938	0.2103	1,590	809	781
TANG	0.6007	0.5854	0.6165		0.5607	0.5152	0.6174	**	0.4001	0.4187	0.3796	1,590	809	781
CASHHOLD	0.1074	0.1121	0.1025	*	0.0698	0.0794	0.0568	***	0.1101	0.1076	0.1125	1,590	809	781
ASYM	5.5828	3.9576	7.2663	***	1.5933	1.2545	2.1428	***	8.9213	6.9534	10.3188	1,590	809	781
GROWTH	0.1679	0.1840	0.1511		0.1101	0.1246	0.0934	***	0.4253	0.4117	0.4386	1,587	809	778
ROA	0.0520	0.0577	0.0462	***	0.0387	0.0412	0.0354	*	0.0875	0.0944	0.0795	1,590	809	781
OPCYC	4.9791	5.0228	4.9337	*	4.8558	4.8390	4.8691		1.0282	1.1221	0.9191	1,586	808	778
LOSS	0.1736	0.1718	0.1754		0.0000	0.0000	0.0000		0.3789	0.3775	0.3806	1,590	809	781

Notes: *, **, and *** indicate a significant difference at the 10%, 5% and 1% levels, respectively. The significance of the differences is assessed based on two-tailed t-tests (mean) and Wilcoxon/Mann–Whitney tests (median).

Table 5-3. Correlation matrix

		1		2		3		4		5		6		7		8	
1	REM	1.0000															
2	AEM	0.3424	***	1.0000													
3	PC	-0.0258		-0.0278		1.0000											
4	TOP5_OWN	-0.1060	***	0.0011		-0.0865	***	1.0000									
5	AUD	-0.1205	***	-0.0778	***	0.1372	***	0.1650	***	1.0000							
6	CG	-0.0613	**	-0.0497	**	0.3120	***	-0.0329		0.3187	***	1.0000					
7	SIZE	0.0154		-0.0088		0.4376	***	-0.1574	***	0.4157	***	0.5439	***	1.0000			
8	AGE	-0.0504	**	0.0046		0.0326		0.1038	***	0.1874	***	0.2576	***	0.1434	***	1.0000	
9	LEV	0.1344	***	-0.0354		0.0715	***	-0.0372		-0.0026		0.0663	***	0.1385	***	-0.0153	
10	TANG	-0.0875	***	-0.0379		-0.0388		0.1109	***	0.1472	***	0.1033	***	0.0142		0.0722	***
11	CASHHOLD	-0.2745	***	-0.1991	***	0.0437	*	0.0553	***	0.1049	***	0.0912	***	-0.0023		0.0913	***
12	ASYM	0.0394		-0.0151		-0.1855	***	0.2974	***	-0.0417	*	-0.2243	***	-0.3264	***	0.0030	
13	GROWTH	-0.0562	**	0.0097		0.0386		-0.0361		-0.0668	***	-0.0885	***	0.0409		-0.1769	***
14	ROA	-0.3458	***	-0.0068		0.0655	***	0.1095	***	0.2478	***	0.1586	***	0.1240	***	0.1911	***
15	OPCYC	0.0893	***	0.0879	***	0.0433	*	-0.1828	***	-0.1906	***	-0.1785	***	-0.0601	**	-0.0303	
16	LOSS	0.1580	***	-0.0584	**	-0.0048		-0.0240		-0.0850	***	-0.0703	***	-0.0746	***	-0.1422	***
		9		10		11		12		13		14		15		16	
9	LEV	1.0000															
10	TANG	0.0605	**	1.0000													
11	CASHHOLD	-0.2817	***	-0.2335	***	1.0000											
12	ASYM	-0.0399		0.0424	*	0.0096		1.0000									
13	GROWTH	0.0214		-0.0895	***	-0.0095		-0.0301		1.0000							
14	ROA	-0.2440	***	-0.1773	***	0.4010	***	-0.0705	***	0.1139	***	1.0000					
15	OPCYC	-0.1091	***	-0.3153	***	-0.1368	***	-0.0775	***	-0.0029		-0.0806	***	1.0000			
16	LOSS	0.1278	***	0.1996	***	-0.1930	***	0.0450	*	-0.1331	***	-0.5483	***	0.0287		1.0000	

Notes: This table presents the Pearson correlation coefficients among the variables used in the main tests. *, **, and *** indicate significance of different at the 10%, 5% and 1% levels, respectively

5.5 Empirical results

5.5.1 Univariate analysis

Table 5.2 reports the descriptive statistics for the main variables used in the empirical analysis. All continues variables are winsorised at the 1% and 99% levels to mitigate the effect of outliers. While the univariate statistics provide an initial indication that real and accruals earnings management activities in politically connected firms are lower than in non-connected firms, the difference is not statistically significant. Table 5.2 also indicates that most of the controlling variables are significantly different across politically connected and non-connected firms.

The mean (median) value of the aggregate real earnings management for the full sample is 0.0078 (0.0391). This descriptive statistics value is comparable with Achleitner et al. (2014), Braam et al. (2015), and Abad et al. (2018), who had mean (median) values of their aggregate real earnings management measures of 0.066 (0.126), -0.006 (-0.068), and -0.0022 (0.0058), respectively.

Meanwhile, the mean (median) value of the accruals earnings management for the full sample is -0.0003 (-0.0008). This value is also comparable with Achleitner et al. (2014), Braam et al. (2015), and Abad et al. (2018), who had mean (median) values of their aggregate real earnings management measures of -0.018 (0.011), 0.026 (0.000), and -0.0008 (-0.0004), respectively.

Pearson correlations are given among the variables reported in Table 5.3, and they seem to show that there are no significant correlations between political connections and both measures of earnings management. The table also shows a positive and significant relationship between the real and accruals earnings management activities measures.

The test result for multicollinearity indicates that there is no multicollinearity problem, with a mean VIF value of 1.43 and the highest score for individual VIF of 2.03 for the firm size variable. Besides the firm size variable, there is no other variable with a VIF value above 2.00.

5.5.2 Main regression results

Table 5.4 presents the results of the second-stage regression analysis of the relationship between political connections and both earnings management measures. The first stage of the estimation involves a probit regression of political connections against the instrument variables, the percentage of connected firms in an industry, *PCTPC_IND*, and regional unemployment rate, *UNEMP*, as well as the lagged value of each earnings

management proxy. The estimated probability of political connections, PC (i.e., the treatment effect measure), is generated in the first stage. The first-stage fitted value for political connections, PC-FIT, is then included in the second-stage regression, in which the dependent variable are the earnings management measures (AEM and REM) to mitigate the endogeneity problem and correct for omitted variable bias (Greene, 2007).

The results in Table 5.4 show a negative and statistically significant (at the 1% level) relationship between political connections and both measures of earnings management (REM and AEM). The evidence in Table 5.4 supports our first hypothesis that politically connected firms have lower earnings management than non-politically connected firms. The results also suggest a concurrent use of real and accruals earnings management activities among listed firms in Indonesia, with a positive and statistically significant relationship between the REM dependent variable measure and the AEM control variable and between the AEM dependent variable and the REM control variable, with both coefficients significant at the 1% level.

Besides political connectedness and the earnings management control variable, there is only one other control variable with a significant relationship to both earnings management measures, namely the profitability ratio (ROA). The results give us a conflicting effect of real and accruals earnings management on firms' profitability. A higher level of real earnings management activities has a negative and statistically significant relationship, at the 1% level, with firms' profitability ratio while a higher level of accruals earnings management has a positive and statistically significant relationship, also at the 1% level, with firms' profitability ratio.

One possible explanation regarding the results of firms' profitability is the nature of both earnings management activities measures. Real earnings management activities require the manipulation of real operational activities and a longer-term planning and activation period compared to accruals earnings management activities (Graham et al., 2005; Roychowdhury, 2006). Real earnings management activities cannot be conducted only at the end of a fiscal period to change a financial performance result, while accruals earnings management activities can be conducted at the end of a fiscal period when all operational activities for the period have been completed. Firm management uses both types of earnings management strategically to maintain the earnings target (Chen et al., 2012a). Management of firms that have engaged in real earnings management activities but still fall short of the expecting earnings target (lower level of profitability) then also utilise accruals earnings management activities to achieve their earnings target.

Table 5-4. Second-stage regression on the relationship between political connections and earnings management using the Heckman treatment effect

	REM	AEM
	1	2
PC-FIT	-0.5271***	-0.0838***
	(0.0382)	(0.0168)
AEM	1.3764***	
	(0.1140)	
REM		0.0782***
		(0.0101)
TOP 5	-0.0843	0.0291**
	(0.0707)	(0.0146)
AUD	-0.0187	-0.0086
	(0.0289)	(0.0060)
CG	0.1039	-0.0314
	(0.1281)	(0.0240)
SIZE	0.0120	-0.0006
	(0.0097)	(0.0020)
AGE	0.0166	0.0075
	(0.0263)	(0.0050)
LEVERAGE	0.0429	-0.0427***
	(0.0636)	(0.0116)
TANG	-0.1379***	-0.0083
	(0.0305)	(0.0068)
CASHHOLD	-0.2018	-0.1689***
	(0.1529)	(0.0282)
ASYM	0.0021*	-0.0002
	(0.0012)	(0.0003)
GROW	-0.0519**	0.0013
	(0.0211)	(0.0053)
ROA	-1.1839***	0.1498***
	(0.3072)	(0.0498)
OPCYC	-0.0087	0.0040
	(0.0128)	(0.0028)
LOSS	0.0164	-0.0180**
	(0.0335)	(0.0072)
Cons	0.2377	0.0403
	(0.1830)	(0.0396)
Industry	Included	Included
Year	Included	Included
1st stage regression		
PCTPC_IND	2.0083***	2.7045***
	(0.5097)	(0.6091)
UNEMPRATE	0.6245***	1.1797**
	(0.2327)	(0.4804)
LAG DEP.VAR.	-1.2672***	-0.7254
	(0.1398)	(0.4603)
_cons	-1.0531***	-1.4508***
	(0.2590)	(0.3158)
Fisher's z (LR)	1.4133***	0.7140***
	(0.0921)	(0.1435)
Ln Std Dev	-0.9031***	-2.4654***
	(0.0726)	(0.0525)
Number of obs.	1,568	1,576
Wald chi2(27)	573.47***	222.47***
Wald test of indep. eqns.	235.66***	24.75***

Notes: Heckman treatment effect regression using maximum likelihood *t*-statistics calculated based on the robust standard errors clustered at firm-level. REM is the measure of real earnings management activities and AEM is the measure of accrual earnings management activities. PC-FIT is the fitted value of PC variable from the first stage regression with two instrumental variables (PCTPC_IND and UNEMP) and lagged dependent variable. Columns 1 &2 report regression coefficients and robust standard errors in parentheses. *, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively (two-tailed). Variables definitions are reported in Table 5.1.

The results regarding asset tangibility seem to support previous studies' suggestions that firms with a higher asset tangibility ratio are less likely to manage earnings (Lev, 1983; Baginski et al., 1999; Leuz et al., 2003; Francis et al., 2004; Perotti and Wagenhofer, 2014). There is a negative relationship between the asset tangibility control variable and both measures of earnings management. However, the relationship is only significant for the real earnings management measure (at the 1% level) and not statistically significant for the discretionary accruals earnings management measure.

The results regarding current revenue growth also support previous studies' assumption that firms with a higher level of current revenue growth are less likely to manage earnings because the managers of firms with higher revenue growth are under less pressure and may already have achieved their growth level target without earnings management activities (Dechow and Skinner, 2000). There is a negative and statistically significant relationship (at the 5% level) between current revenue growth and the real earnings management activities measure, but there is no statistically significant relationship between the discretionary accruals earnings management activities measure and current revenue growth.

The last control variable that has a significant relationship with the real earnings management activities measure is information asymmetry. The result also supports previous studies' suggestion that a higher level of earnings management activities is related to a higher level of information asymmetry (Venkatesh and Chiang, 1986; Yohn, 1998; Richardson, 2000; Bhattacharya et al., 2011; Bhattacharya et al., 2013; Abad et al., 2018). There is a positive and statistically significant relationship (at the 10% level) between information asymmetry and the real earnings management activities measure. However, there is no statistically significant relationship between information asymmetry and the discretionary accruals earnings management activities measure.

There are four other control variables that have a significant relationship with the discretionary accruals earnings management activities measure but no significant relationship with the real earnings management activities measure. The first one is the leverage ratio, which has a negative and statistically significant relationship, at the 1% level, with the discretionary accruals earnings management activities measure. This result is against our expectation and contradicts previous studies' suggestion that firms with a higher level of leverage are associated with a higher level of earnings management activities (DeFond and Jiambalvo, 1994; Sweeney, 1994; Ho et al., 2016).

Besides the leverage ratio, the result regarding the cash holding ratio is also against our expectation. Previous studies suggest that a higher cash holding ratio is related

to poor earnings quality and a potentially higher level of earnings management activities (Kalcheva and Lins, 2007; Sun et al., 2012). However, this study result shows a negative and statistically significant relationship (at the 1% level) between the cash holding ratio and discretionary accruals earnings management activities, indicating that a higher level of cash holding is actually related to a lower level of discretionary accruals earnings management activities.

One possible explanation regarding the results of the leverage and cash holding ratio can be found from Jelinek's (2007) findings. According to Jelinek (2007), firms with increasing leverage have a lower level of discretionary accruals earnings management activities due to the extra scrutiny placed by the lenders as part of the financing agreement. The debt repayment that arises from the high leverage level results in a high level of cash holding as managers have precautionary motives to protect the firms against adverse shocks and to avoid debt repayment problems, rather than self-interested motives (Al-dhamari and Ismail, 2015).

The result regarding loss reporting supports previous studies' suggestion that firms that report financial losses are less likely to engage in earnings management activities (Leuz et al., 2003; Perotti and Wagenhofer, 2014; Choi et al., 2018). There is a negative and statistically significant relationship (at the 5% level) between loss and the discretionary accruals earnings management activities measure, but there is no statistically significant relationship between the real earnings management activities measure and loss.

Finally, the results regarding the ownership concentration control variable also support previous studies' suggestion of a positive relationship between a higher level of ownership concentration and the earnings management activities measures (Claessens et al., 2000a; Villalonga and Amit, 2006; Jiang et al., 2010; Su et al., 2014).

5.5.3 Corporate governance quality subsamples regression results

The second hypothesis of this study concerns the complementary relationship between political connections and corporate governance quality with regard to earnings management activities. To test this hypothesis, we divide the samples into two categories of subsamples, namely high corporate governance quality and low corporate governance quality. The samples are divided based on the median value of the corporate governance quality control variable, CG.

If political connectedness and corporate governance quality have a substitutionary relationship, there should be a similar effect of political connections for both sets of subsamples. However, if political connectedness and corporate governance quality have a complementary relationship, the effect of political connections in reducing real earnings management activities should be stronger in the firms with a higher level of corporate governance quality subsample than in the firms with a lower level of corporate governance quality subsample.

The results in Table 5.5 support our second hypothesis that the negative relationship between political connections and earnings management activities (either real earnings management or discretionary accruals earnings management activities) is more pronounced in firms with higher corporate governance quality. These results are consistent with the previous chapter findings and gives more confirmation on the complementary relationship between political connections and corporate governance quality among Indonesian listed firms.

Political connectedness has a negative and statistically significant relationship with the real earnings management activities measure (at the 1% level) and the accruals earnings management activities measure (at the 10% level) on the subsample of firms with a higher level of corporate governance quality. These results indicate that political connections are effective in reducing earnings management activities in firms with high corporate governance quality.

However, the results in Table 5.5 also suggest that in firms with a lower level of corporate governance quality, not only is political connectedness not effective in reducing earnings management activities, it is actually related to a higher level of both real and accruals earnings management activities. Political connectedness has a positive and statistically significant relationship with the real earnings management activities measure (at the 1% level) and the accruals earnings management activities measure (at the 10% level) on the subsample of firms with a lower level of corporate governance quality. These results are also consistent with the findings from the previous empirical chapter on the relationship between political connections and firms internal conflicts of interest.

These results seem to confirm Mangena et al. (2012) assertion that external factors, such as political stability, can also influence firms' environmental setting, and its impact can change shareholders' and managers' behaviours. Moreover, the results also confirmed Schillemans and Bjurstrom (2019) arguments that human behaviour is complex and it is not possible to be explained by a single theory alone.

Table 5-5. Regressions results for the joint effect of political connections and corporate governance quality on earnings management

	HIGH-CG		LOW-CG	
	REM	AEM	REM	AEM
	1	2	3	4
PC-FIT	-0.4549***	-0.0584*	0.6297***	0.0720*
	(0.0507)	(0.0312)	(0.0721)	(0.0368)
AEM	1.3862***		1.3500***	
	(0.1320)		(0.1629)	
REM		0.1008***		0.0685***
		(0.0154)		(0.0126)
TOP 5	0.1055	0.0069	-0.3827***	0.0382*
	(0.0725)	(0.0183)	(0.1198)	(0.0220)
AUD	-0.0362	0.0001	0.0332	-0.0133
	(0.0286)	(0.0070)	(0.0409)	(0.0096)
SIZE	0.0205**	-0.0024	0.0036	-0.0003
	(0.0098)	(0.0024)	(0.0164)	(0.0029)
AGE	-0.0112	0.0074	-0.0103	0.0095
	(0.0239)	(0.0054)	(0.0436)	(0.0080)
LEVERAGE	0.0764	-0.0567***	0.1384*	-0.0385**
	(0.0764)	(0.0161)	(0.0812)	(0.0157)
TANG	-0.0669**	-0.0221**	-0.1755***	0.0097
	(0.0302)	(0.0091)	(0.0451)	(0.0089)
CASHHOLD	0.0502	-0.1930***	-0.3682	-0.1625***
	(0.1461)	(0.0308)	(0.2308)	(0.0422)
ASYM	-0.0002	0.0006	0.0039**	-0.0007**
	(0.0012)	(0.0004)	(0.0017)	(0.0003)
GROW	-0.0030	-0.0055	-0.1125***	0.0055
	(0.0252)	(0.0089)	(0.0294)	(0.0065)
ROA	-1.3967***	0.153**	-0.7789*	0.1765**
	(0.2860)	(0.0658)	(0.4486)	(0.0759)
OPCYC	-0.0035	0.0048	-0.0062	0.0039
	(0.0145)	(0.0037)	(0.0173)	(0.0040)
LOSS	-0.0157	-0.0114	0.0669	-0.0204*
	(0.0337)	(0.0092)	(0.0555)	(0.0106)
cons	0.0809	0.0673	0.0793	-0.0545
	(0.1878)	(0.0531)	(0.3113)	(0.0551)
Industry	Included	Included	Included	Included
Year	Included	Included	Included	Included
1st stage regression				
PCTPC_IND	1.8989***	1.9289**	2.7902***	3.3092***
	(0.6691)	(0.7592)	(0.6967)	(0.7793)
UNEMPRATE	5.0552**	3.9556	-0.2446	0.6073
	(2.5683)	(3.4283)	(0.9681)	(0.9116)
LAG DEP.VAR.	-1.6178***	-0.8918	1.1606***	0.1110
	(0.1583)	(0.7614)	(0.1556)	(0.5871)
_cons	-1.1275***	-1.0264**	-1.6265***	-1.9763***
	(0.3887)	(0.4739)	(0.3578)	(0.3993)
Fisher's z (LR)	1.3198***	0.5700**	-1.3664***	-0.5936**
	(0.0945)	(0.2900)	(0.1523)	(0.2913)
Ln Std Dev	-1.1158***	-2.6037***	-0.8045***	-2.4456***
	(0.0882)	(0.0856)	(0.0837)	(0.0877)
Number of obs	788	792	780	784
Wald chi2(26)	395.38***	202.22***	335.59***	124.73***
Wald test of indep. eqns.	194.97***	3.86**	80.45***	4.15**

Notes: Subsamples regressions, dividing the samples into two subsamples with a similar number of samples, based on the median value of CG, the corporate governance quality control variable. Columns 1 &2 report regression coefficients and robust standard errors in parentheses for firms with CG score above the median value (HIGH-CG). Columns 3&4 report regression coefficients and robust standard errors in parentheses for firms with CG score below the median value (LOW-CG). REM is the measure of real earnings management activities and AEM is the measure of accrual earnings management activities. PC-FIT is the fitted value of PC variable from the first stage regression with two instrumental variables (PCTPC_IND and UNEMP) and lagged dependent variable. *, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively (two-tailed). Variables definitions are reported in Table 5.1.

In a country with a weak legal and investor protection system and a high level of ownership concentration such as Indonesia, managers have the incentives and the ability to engage in earnings management activities to achieve their earnings target more effectively (Leuz et al., 2003; Chen et al., 2012a). Politicians serving as board members in the same setting also have more incentives to increase their wealth via opportunistic behaviour and collusion with the managers of firms (Chen et al., 2008; Braun and Raddatz, 2010; Tahoun and van Lent, 2018). As a result of the collusion activities between managers and politicians, earnings managament activities increased.

However, previous studies also suggest that managers' and politicians incentives and ability to engage in earnings management activities are inhibited and greatly reduced in the presence of good corporate governance system. Improved transparency and the implementation of good corporate governance system makes managers', controlling shareholders and politicians act responsibly (Leuz et al., 2003; Dahya et al., 2008; Jaggi et al., 2009; Setia-Atmaja et al., 2011; Bona-Sanchez et al., 2014; Chen et al., 2015; Khalil and Ozkan, 2016; Bona-Sánchez et al., 2019).

5.5.4 Audit quality subsamples regression results

The third hypothesis of this study also explores the complementary relationship between political connections and corporate governance quality, but using a different corporate governance measure, namely auditor quality. To test this hypothesis, we divide the sample into two categories of subsamples, namely firms with higher audit quality, marked by the appointment of a big four public accounting firm as the firm's external auditor, and firms with lower audit quality, marked by the appointment of a non-big four public accounting firm as the firm's external auditor. The sample is divided based on the value of the auditor quality (AUD) dummy control variable, where the appointment of a big four public accounting firms has a value of 1 and the appointment of a non-big four public accounting firm has a value of 0.

Similar to the exploration using the corporate governance index as a measure of corporate governance quality, if a substitutionary relationship exists between political connections and audit quality, there should be a similar effect of political connections for both sets of subsamples with big four and non-big four public accounting firms. However, if political connectedness and audit quality have a complementary relationship, the effect of political connections in reducing real earnings management activities should be

stronger in the firms with higher audit quality (big four public accounting firms) subsample than in the firms with a lower audit quality (non-big four) subsample.

The results in Table 5.6 support the third hypothesis of this chapter that the negative relationship between political connectedness and earnings management is more pronounced in firms with a higher audit quality (firms with big four public accounting firms as external auditor).

Political connectedness has a negative and statistically significant relationship with the real earnings management activities measure and the accruals earnings management activities measure (both of them are significant at the 1% level) on the subsample of firms with big four public accounting firms as auditors. These results indicate that political connections are effective in reducing earnings management activities in firms with higher audit quality.

Moreover, the results also indicate that when audit quality is low, politically connected firms actually have higher level of earnings management activities (either real earnings management or discretionary accruals earnings management activities than non-connected firms. Political connectedness has a positive and statistically significant relationship with the real earnings management activities measure and the accruals earnings management activities measure, both also significant at the 1% level, on the subsample of firms with a lower level of audit quality.

These results are consistent with the previous section results on corporate governance quality and gives more evidence on the complementary relationship between political connections and corporate governance quality among Indonesian listed firms. The results from Table 5.6 also support previous studies' suggestion that the effectiveness of external auditing and its ability to constrain earnings management activities is contingent upon the quality of the public accounting firms (Teoh and Wong, 1993; Becker et al., 1998; Francis and Wang, 2008; Choi et al., 2018).

The way that international public accounting firms operate in Indonesia is similar with those in Japan (Barton, 2005) and China (Mo et al., 2015). Big four public accounting firms such as Pricewaterhouse Cooper must find a local public accounting firm as a partner and runs the auditing and consultation activities through these local partners (Barton, 2005; Mo et al., 2015). While the international public accounting firms engage in such strategy out of necessity, the partnership improve the local public accounting reputation and human resources capabilities through vast networking and training program such as international secondment (Beaverstock, 1991).

Table 5-6. Regression results for the joint effect of political connections and audit quality on earnings management

	BIG FOUR		NON-BIG FOUR	
	REM	AEM	REM	AEM
	1	2	3	4
PC-FIT	-0.5548***	-0.0994***	0.5317***	0.0982***
	(0.0577)	(0.0154)	(0.0703)	(0.0173)
AEM	1.4316***		1.2949***	
	(0.1653)		(0.1334)	
REM		0.0744***		0.0742***
		(0.0132)		(0.0138)
TOP 5	0.0992	0.0438	-0.2313***	0.0193
	(0.1583)	(0.0314)	(0.0839)	(0.0160)
CG	-0.0819	0.0120	0.2415	-0.0695**
	(0.1643)	(0.0289)	(0.1554)	(0.0322)
SIZE	0.0249*	-0.0069**	-0.0026	0.002
	(0.0147)	(0.0030)	(0.0154)	(0.0026)
AGE	0.0009	0.0115	-0.0124	0.0039
	(0.0324)	(0.0073)	(0.0361)	(0.0064)
LEVERAGE	-0.0638	-0.0529**	0.1407*	-0.0351***
	(0.0972)	(0.0249)	(0.0757)	(0.0124)
TANG	-0.1891***	-0.0237**	-0.1187***	0.0012
	(0.0489)	(0.0117)	(0.0372)	(0.0077)
CASHHOLD	-0.4834**	-0.1775***	-0.0432	-0.1828***
	(0.2261)	(0.0356)	(0.1941)	(0.0384)
ASYM	0.0017	-0.0005	0.0027*	-0.0003
	(0.0018)	(0.0004)	(0.0014)	(0.0003)
GROW	-0.0887*	0.0053	-0.0467**	-0.0006
	(0.0495)	(0.0159)	(0.0238)	(0.0058)
ROA	-0.9526***	0.0779	-1.0417***	0.2298***
	(0.3665)	(0.0661)	(0.4010)	(0.0682)
OPCYC	-0.0015	0.0076	-0.0057	0.0031
	(0.0306)	(0.0054)	(0.0128)	(0.0031)
LOSS	0.0291	-0.0094	0.0341	-0.0187
	(0.0422)	(0.0108)	(0.0431)	(0.0094)
cons	0.1693	0.0780	-0.0235	-0.0379
	(0.3863)	(0.0698)	(0.2440)	(0.0456)
Industry	Included	Included	Included	Included
Year	Included	Included	Included	Included
1st stage regression				
PCTPC_IND	1.7068**	1.7183*	3.092***	3.5546***
	(0.7903)	(0.9641)	(0.6915)	(0.7542)
UNEMPRATE	0.4188**	1.1107**	0.3885	2.3029**
	(0.1767)	(0.4616)	(0.3298)	(1.1333)
LAG DEP.VAR.	-1.6234***	-1.4487*	1.2282***	0.6117
	(0.1830)	(0.7753)	(0.1811)	(0.5250)
_cons	-0.7376*	-0.7396	-1.8032***	-2.1489***
	(0.3918)	(0.4903)	(0.3682)	(0.4034)
Fisher's z (LR)	1.6927***	0.9885***	-1.214***	-0.8648***
	(0.1266)	(0.1398)	(0.1505)	(0.1537)
Ln Std Dev	-0.9127***	-2.4525***	-0.9599***	-2.411***
	(0.1073)	(0.0710)	(0.0960)	(0.0586)
Number of obs	629	633	939	943
Wald chi2(29)	358.62***	253.81***	400.22***	175.43***
Wald test of indep. eqns.	178.64***	50.02***	65.07***	31.67***

Notes: Subsamples regressions, dividing the samples into two subsamples based on audit quality (AUD) control variables. Columns 1 &2 report regression coefficients and robust standard errors in parentheses for firms which appoint big four public accounting firms (BIG FOUR). Columns 3 &4 report regression coefficients and robust standard errors in parentheses for firms which appoint non-big four public accounting firms (NON-BIG FOUR) as its external auditors. REM is the measure of real earnings management activities and AEM is the measure of accrual earnings management activities. PC-FIT is the fitted value of PC variable from the first stage regression with two instrumental variables (PCTPC_IND and UNEMP) and lagged dependent variable. *, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively (two-tailed). Variables definitions are reported in Table 5.1.

The results from this study is consistent with those of Fan and Wong (2005) which find that the appointment of high-quality auditors, even in countries with a weak legal and investor protection system can still have a significant effect on reducing conflicts between managers and shareholders (Fan and Wong, 2005) and Mo et al. (2015) which suggest that big four public accounting firms which partnered with local public accounting firms still care about their reputations and select a capable local partner.

5.6 Robustness check

5.6.1 Individual measures of REM and alternatives measures of AEM

While we believe that using an aggregate measure of real earnings management activities enables us to capture the overall effects in a comprehensive measure (Cohen et al., 2008), we are also aware that different individual real earnings management measures may have different implications, and there is the probability of contradictory individual measures' results that can dilute the composite measure effect.

As such, we measure each individual real earnings management measure, namely abnormal cash flow from operations (ABNCFO), abnormal discretionary expenses (ABNDISEXP) and abnormal production costs (ABNPROD), based on Equations 5.1, 5.2 and 5.3, respectively. To make the interpretation easier, we multiply the original value of abnormal cash flow from operation and abnormal discretionary expenses by minus 1. NABNCFO represents the value of abnormal cash flow from operations after minus 1 multiplication and NABNDISEXP represents the value of abnormal discretionary expenses after minus 1 multiplication. Lower values of NABNCFO, NABNDISEXP and ABNPROD indicate a lower level of real earnings management activities.

The results in Table 5.7 indicate that all individual measures' results are consistent with the notion that political connectedness is related to a lower level of real earnings management activities. Political connectedness has a negative and statistically significant relationship with all individual real earnings management activities measures (NABNCFO, NABNDISEXP and ABNPROD), and all of the results are significant at the 1% level. These results also alleviate any doubt that the composite real earnings management measure (REM) may suffer the dilution effect from contradictory individual real earnings management measures.

Table 5-7. Individual measures of real earnings management

	NABNCFO	NABNDISEXP	ABNPROD
	1	2	3
PC-FIT	-0.1242***	-0.3134***	-0.2479***
	(0.0160)	(0.0227)	(0.0184)
TOP 5	0.0264	-0.0683**	-0.0186
	(0.0186)	(0.0330)	(0.0310)
AUD	-0.0142*	-0.0036	-0.0085
	(0.0076)	(0.0150)	(0.0130)
CG	-0.0072	0.0449	-0.0050
	(0.0321)	(0.0664)	(0.0585)
SIZE	0.0044	0.0071	0.0052
	(0.0031)	(0.0046)	(0.0051)
AGE	0.0192***	-0.0009	0.0104
	(0.0073)	(0.0133)	(0.0121)
LEVERAGE	-0.0162	-0.0067	0.0072
	(0.0177)	(0.0346)	(0.0273)
TANG	-0.0846***	-0.0252	-0.0723***
	(0.0092)	(0.0161)	(0.0167)
CASHHOLD	-0.2244***	-0.0989	-0.2094***
	(0.0380)	(0.0637)	(0.0686)
ASYM	-0.0002	0.0013**	0.0004
	(0.0003)	(0.0006)	(0.0006)
GROW	0.0001	-0.0391***	-0.0059
	(0.0065)	(0.0127)	(0.0108)
ROA	-0.5842***	-0.1615	-0.5286***
	(0.0812)	(0.1091)	(0.1471)
OPCYC	0.0044	-0.0033	0.0002
	(0.0042)	(0.0068)	(0.0055)
LOSS	-0.0150	-0.0064	0.0025
	(0.0096)	(0.0157)	(0.0170)
Cons	0.0273	0.1309	0.1191
	(0.0506)	(0.0844)	(0.0907)
Industry	Included	Included	Included
Year	Included	Included	Included
1st stage regression			
PCTPC_IND	2.6393***	1.7146***	2.3189***
	(0.6058)	(0.4570)	(0.5394)
UNEMPRATE	1.0316**	0.3727**	0.8007***
	(0.4096)	(0.1560)	(0.2850)
Lag D.Var	-0.7780**	-3.0241***	-2.2175***
	(0.3566)	(0.3185)	(0.2826)
_cons	-1.4087***	-0.851***	-1.2393***
	(0.3107)	(0.2320)	(0.2746)
Fisher's z (LR)	0.8591***	1.6126***	1.2984***
	(0.1108)	(0.1009)	(0.0926)
Ln Std Dev	-2.1929***	-1.3832***	-1.6366***
	(0.0562)	(0.0882)	(0.0686)
Number of obs	1,582	1,576	1,573
Wald chi2(26)	416.57***	384.55***	464.89***
Wald test of indep. eqns.	60.09***	255.60***	196.60***

Notes: Heckman treatment effect regression using maximum likelihood with firm clustering and robust standard error. ABNCFO, ABNDISEXP & ABNPROD are the individual measures of real earnings management activities from equation * and equation *. PC-FIT is the fitted value of PC variable from the first stage regression with two instrumental variables (PCTPC_IND and UNEMP) and lagged dependent variable.). Columns 1,2&3 report regression coefficients and robust standard errors in parentheses.*, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively (two-tailed). Variables definitions are reported in Table 5.1.

The original Jones (1991) accruals earnings management model is estimated at the industry-year level as follows:

$$TAC_{i,t}/TA_{i,t-1} = \alpha_1\left[1/TA_{i,t-1}\right] + \alpha_2\left[(\Delta Sales_{i,t})/TA_{i,t-1}\right] + \alpha_3\left[GPPE_{i,t}/TA_{i,t-1}\right] + \varepsilon_{i,t} \quad (5.8)$$

where *TAC* denotes total accruals, calculated as net income before extraordinary items (*NIBE*) minus cash flow from operating activities (*CFO*); *TA* is the total assets; *ΔSales* is the change in sales revenue from year *t* to year *t-1*; and *GPPE* is gross property, plant and equipment.

The normal level of accruals (ACRJ) is estimated from Equation 5.8. The Jones model abnormal accruals (JONES) is the difference between the actual ACRJ minus the normal level of ACRJ estimated coefficient calculated from Equation 5.8. Higher values of abnormal accruals imply a higher level of accruals earnings management.

Meanwhile, the modified Jones accruals earnings management model (Dechow et al., 1995) is estimated at the industry-year level as follows:

$$TAC_{i,t}/TA_{i,t-1} = \alpha_1\left[1/TA_{i,t-1}\right] + \alpha_2\left[(\Delta Sales_{i,t} - \Delta REC_{i,t})/TA_{i,t-1}\right] + \alpha_3\left[GPPE_{i,t}/TA_{i,t-1}\right] + \varepsilon_{i,t} \quad (5.9)$$

where *TAC* denotes total accruals, calculated as net income before extraordinary items (*NIBE*) minus cash flow from operating activities (*CFO*); *TA* is the total assets; *ΔSales* is the change in sales revenue from year *t* to year *t-1*; ΔREC is the change in account receivables from year *t* to year *t-1*; and *GPPE* is gross property, plant and equipment.

The normal level of accruals (ACRMJ) is estimated from Equation 5.9. The modified Jones model abnormal accruals (MJONES) is the difference between actual ACRMJ minus the normal level of ACRMJ estimated coefficient calculated from Equation 5.9. Higher values of abnormal accruals imply a higher level of accruals earnings management.

The results from the alternative accruals models (JONES and MJONES) in Table 5.8, especially regarding political connectedness, are largely similar to our main accruals earnings management models. Political connectedness has a negative and statistically significant relationship with all alternative accruals earnings management activities measure (MJONES and JONES), with both results significant at the 1% level.

Table 5-8. Alternatives measures of accruals earnings management

	MJONES	JONES
	1	2
PC-FIT	-0.0962***	-0.0979***
	(0.0169)	(0.0168)
TOP 5	0.0199	0.0200
	(0.0146)	(0.0143)
AUD	-0.0103	-0.0107*
	(0.0063)	(0.0062)
CG	-0.0169	-0.0157
	(0.0260)	(0.0255)
SIZE	0.0011	0.0012
	(0.0022)	(0.0022)
AGE	0.0066	0.0072
	(0.0054)	(0.0053)
LEVERAGE	-0.0547***	-0.059***
	(0.0141)	(0.0142)
TANG	-0.0181**	-0.0162**
	(0.0072)	(0.0070)
CASHHOLD	-0.2186***	-0.2223***
	(0.0280)	(0.0281)
ASYM	-0.0002	-0.0002
	(0.0003)	(0.0003)
GROW	-0.0059	-0.0089
	(0.0064)	(0.0064)
ROA	0.2127***	0.2126***
	(0.0536)	(0.0543)
OPCYC	0.0052*	0.0059*
	(0.0031)	(0.0031)
LOSS	-0.0248***	-0.024***
	(0.0080)	(0.0081)
cons	0.034	0.0294
	0.0398	0.0398
Industry	Included	Included
Year	Included	Included
1st stage regression		
PCTPC_IND	2.729***	2.7187***
	(0.6092)	(0.6081)
UNEMPRATE	1.3601***	1.3557***
	(0.5040)	(0.5016)
Lag D.Var	-0.5367	-0.5695
	(0.4384)	(0.4351)
_cons	-1.477***	-1.472***
	(0.3146)	(0.3143)
Fisher's z (LR)	0.7286***	0.7487***
	(0.1278)	(0.1285)
Ln Std Dev	-2.3644***	-2.3569***
	(0.0491)	(0.0500)
Number of obs	1,577	1,581
Wald chi2(26)	192.04***	197.77***
Wald test of indep. eqns.	32.48***	33.92***

Notes: Heckman treatment effect regression using maximum likelihood with firm clustering and robust standard error. JONES and MJONES are the alternative measures of accruals earnings management activities from equation * and equation *. PC-FIT is the fitted value of PC variable from the first stage regression with two instrumental variables (PCTPC_IND and UNEMP) and lagged dependent variable.). Columns 1 & 2 report regression coefficients and robust standard errors in parentheses. *, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively (two-tailed). Variables definitions are reported in Table 5.1.

5.6.2 Absolute value of AEM and the decile ranked of REM & AEM

There are two major strands of accruals measurement in the literature, namely using signed abnormal accruals and unsigned (absolute) abnormal accruals as the basis for the discretionary accruals earnings management measures. Using signed abnormal accruals is preferred when the observation is related to the sign of abnormal accruals, whereby positive abnormal accruals are a sign of income-increasing earnings management activities and negative abnormal accruals are a sign of income-decreasing management activities (Menon and Williams, 2004; Lennox et al., 2016). On the other hand, using absolute accruals is preferred when the emphasis is placed on the magnitude of the abnormal accruals as a proxy for the level of earnings management activities (Myers et al., 2003; Ashbaugh-Skaife et al., 2008; Lennox et al., 2016).

Real earnings management measures do not follow the same direction of their accruals' counterpart model. Almost all of the research on real earnings management topics, whether analysing real earnings management activities alone (Roychowdhury, 2006; Cheng et al., 2013b; Abad et al., 2018; Commerford et al., 2018; Ding et al., 2018) or conducting a comparison between real and accruals earnings management activities (Cohen et al., 2008; Achleitner et al., 2014; Braam et al., 2015; Enomoto et al., 2015; Choi et al., 2018; Hamza and Kortas, 2019), always use the sign of abnormal measures of real earnings management activities.

This is mostly because real earnings management measures already assign the direction indicator in their measures (lower abnormal cash flow from operations, lower discretionary expenses and higher production costs as an indicator of real earnings management activities), while accruals earnings management activities measures can go both ways (income-increasing and income-decreasing activities are both earnings management activities).

We use the absolute value of discretionary accruals earnings management activities |AEM| to check whether the results regarding the magnitude of accruals earnings management activities differ from the main regression results.

The final robustness check of this study is the usage of the decile rank of real earnings management activities and accruals earnings management activities measures. Some studies suggest that using the decile ranks instead of raw value-based measures of earnings management activities can help reduce the noise in the measurement and eliminate the impact of outliers in empirical analyses (Kim and Sohn, 2013; Choi et al., 2018).

We follow Choi et al.'s (2018) method for constructing the decile rank dependent variable for the real and accruals earnings management activities measures. First, we create new variables, rank REM and rank AEM, which represent the decile position based on the average decile value of the real earnings management measure (REM) and discretionary accruals earnings management measure (AEM) for each industry and each year.

The firms in the first decile are assigned the value of 0, the second decile are assigned the value of 1, etc., until the last decile (10^{th} decile), where the firms are assigned the value of 9. Then, we create further variables, DECILEREM and DECILEAEM, which are the results of dividing the rank REM and rank AEM values for each firm with 9. Both DECILEREM and DECILEAEM have a value between 0 and 1 for each firm in each year.

The results in Table 5.9 show that political connectedness is negatively related to |AEM|, with the result statistically significant at the 1% level. This result indicate that not only are political connections related to the reduction of accruals earnings management activities (main regression results in Table 5.4), they also reduce the magnitude of earnings management activities (Table 5.9 results), which further indicates that on average, politically connected firms have a closer to normal level (no earnings management activities) of discretionary accruals earnings management.

Table 5.9 also shows the regression results when we use DECILEREM and DECILEAEM as the dependent variables. Political connectedness has a negative and statistically significant relationship, at the 1% level, with DECILEREM, and a negative and statistically significant relationship, at the 10% level, with DECILEAEM. The results using decile rank are consistent with the main regression results and our main hypotheses regarding the role of political connectedness in reducing earnings management activities and further enhance the validity of our results.

Moreover, besides the results regarding the political connections variable, the results from Table 5.9 also support the ideas of concurrent/simultaneous use of both real and discretionary accruals earnings management activities by managers in countries with a weak investor protection and legal system, since they have more incentives and less restriction to use both types of earnings management concurrently.

Table 5-9. Absolute value of AEM measure and the decile ranked of REM & AEM

	|AEM|	DECREM	DECAEM
	1	2	3
PC-FIT	-0.0704***	-0.4714***	-0.2663*
	(0.0127)	(0.0243)	(0.1434)
|REM|	0.0465***		
	(0.0110)		
DECAEM		0.3174***	
		(0.0223)	
DECREM			0.3987***
			(0.0397)
TOP 5	0.0005	-0.0564	0.1398**
	(0.0096)	(0.0591)	(0.0577)
AUD	0.0006	-0.0235	-0.031
	(0.0041)	(0.0224)	(0.0235)
CG	0.0059	0.0833	-0.1486
	(0.0221)	(0.0980)	(0.0941)
SIZE	-0.0003	0.0157**	-0.0043
	(0.0014)	(0.0078)	(0.0083)
AGE	-0.0039	0.0225	0.0227
	(0.0036)	(0.0225)	(0.0197)
LEVERAGE	0.0347***	0.0526	-0.1642***
	(0.0098)	(0.0475)	(0.0442)
TANG	-0.0102*	-0.1167***	0.0008
	(0.0059)	(0.0258)	(0.0259)
CASHHOLD	0.0093	-0.2821**	-0.5427***
	(0.0195)	(0.1200)	(0.1074)
ASYM	-0.0001	0.0011	-0.0013
	(0.0002)	(0.0009)	(0.0010)
GROW	0.0086*	-0.0332*	0.0095
	(0.0047)	(0.0193)	(0.0174)
ROA	0.0706**	-0.9167***	0.4071**
	(0.0343)	(0.2098)	(0.1841)
OPCYC	-0.0002	-0.0085	0.0166
	(0.0022)	(0.0106)	(0.0104)
LOSS	0.0070	0.072***	-0.1271***
	(0.0061)	(0.0240)	(0.0259)
Cons	0.064**	0.3889***	0.4738***
	(0.0296)	(0.1482)	(0.1755)
Industry	Included	Included	Included
Year	Included	Included	Included
1st stage regression			
PCTPC_IND	2.7507***	2.1922***	2.6734***
	(0.6102)	(0.5337)	(0.6144)
UNEMPRATE	0.9282*	0.6635**	1.1685**
	(0.4934)	(0.2804)	(0.5478)
LAG DEP.VAR.	-1.5416**	-1.2695***	-0.1957
	(0.6683)	(0.1049)	(0.1508)
_cons	-1.3392***	-0.5163*	-1.333***
	(0.3147)	(0.2705)	(0.3410)
Fisher's z (LR)	0.7089***	1.4841***	0.6113**
	(0.1522)	(0.0692)	(0.3104)
Ln Std Dev	-2.7197***	-1.0786***	-1.1702***
	(0.0599)	(0.0405)	(0.0899)
Number of obs	1,576	1,568	1,576
Wald chi2(27)	160.17***	1,751.53***	287.75***
Wald test of indep. eqns.	21.69***	459.31***	3.88**

Notes: Heckman treatment effect regression using maximum likelihood *t*-statistics calculated based on the robust standard errors clustered at firm-level using absolute values of earnings management measures. |AEM| is the absolute value of AEM, DECILEREM is the decile rank value of REM and DECILEAEM is the decile rank value of AEM. PC-FIT is the fitted value of PC variable from the first stage regression with two instrumental variables (PCTPC_IND and UNEMP) and lagged dependent variable. Columns 1-3 report regression coefficients and robust standard errors in parentheses. *, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively (two-tailed). Variables definitions are reported in Table 5.1.

5.6.3 Political connections, ownership types and earnings management

The main regression results in Table 4.6 regarding ownership concentration show just one significant relationship with the real earnings management measures. A higher level of ownership concentration is associated with a higher level of discretionary expenses, significant at the 5% level, which indicates a lower level of real earnings management activities. There are various types of owners and investors in the capital market, such as family and non-family, government and private, domestic and foreign, individuals, corporations, and institutional investors. In this section, we test whether different types of owners/investors have different effects on firms' real earnings management activities.

According to Carney et al. (2015), the three major types of ownership in the Indonesian capital market are family ownership (57%), state ownership (14%) and widely held corporation ownership (13%). Besides these three major ownership types, institutional investors, especially foreign institutional investors, also play a major part in the Indonesian capital market by holding around 70% of free-float shares (Rhee and Wang, 2009). In this section, we analyse the effect of different types of owners based on those three major types of controlling shareholders on the Indonesian capital market, namely family firms (FAM), state-owned enterprises (SOE), and corporations (CORP). The classification for each type of ownership is based on the ultimate shareholders of the firm.

Information regarding the identity of the ultimate shareholders is mainly hand-collected from the annual reports, with missing data supplemented from the IPO prospectus, tax amnesty filing, Capital IQ (Compustat) database and other relevant and reliable sources (i.e. market screener, Yahoo finance, etc).

FAM is a dummy variable with the value of 1 if the ultimate shareholders are family firms, and zero otherwise. SOE is a dummy variable with the value of 1 if the ultimate shareholders are government, and zero otherwise. CORP is a dummy variable with the value of 1 if the ultimate shareholders are corporations, and zero otherwise. To avoid overlapping between the three categories, a firm can only have one dummy variable of 1 among the three ownership type dummies.

There are contradicting views regarding the effect of family ownership on earnings management activities. On the one hand, Almeida and Wolfenzon (2006), Jaggi et al. (2009), and Bhaumik and Gregoriou (2010) suggest that family firms are more likely to expropriate minority shareholders' interests through earnings management activities. In some cases, family firms manage to gain large benefits from political connections by

exploiting the weak system of a country with a high level of corruption (Morck and Yeung, 2004).

On the other hand, Prencipe et al. (2008) find that family firms tend to engage in informative earnings management activities that have a positive effect on the firm's going concern, such as alleviating debt covenant violations. Bertrand and Schoar (2006) argue that some family firms exist with a long-term view and the aim to build a reputation and legacy, while others exist as a substitute for missing institutions and a weak legal system. According to Wang (2006), founding family ownership in the US is associated with higher earnings quality, measured by abnormal accruals, earnings informativeness and persistence of transitory loss components in earnings. This result is consistent with Jiraporn and DaDalt (2009), who find that the presence of family ownership in the US diminishes earnings management by 36%.

Similarly, Achleitner et al. (2014) suggest that family firms in Germany are less likely to engage in real earnings management activities and use accruals earnings management as a tool that helps families retain transgenerational control. It is argued that family firms avoid the harmful consequences of earnings management due to their long-term presence, which results in a long-term vision for the firms and the need to maintain the family reputation and long-term sustainability (Anderson et al., 2003; Wang, 2006; Jiraporn and DaDalt, 2009; Prencipe et al., 2011; Achleitner et al., 2014).

Regarding government ownership, the literature also gives conflicting evidence on the effect of government ownership on earnings management activities. On the one hand, several studies suggest that a higher level of government ownership, especially in developing countries, is associated with a potentially higher level of earnings management. Firms with a government as the controlling owner get preferential treatment, abuse the regulations and engage more in earnings management practices (Ding et al., 2007; Chen et al., 2008).

On the other hand, other studies find that the level of earnings management activities in state-owned enterprises is actually lower than in non-state owned enterprises (Cheng et al., 2015). Moreover, government ownership also discouraged earnings management practices among state-owned enterprises after the implementation of IFRS in China (Wang and Campbell, 2012).

Regarding the effect of having a corporation as the controlling shareholder of a firm, there is also conflicting evidence in the literature. On the one hand, the separation of ownership and control that happens when a corporation, especially a widely held corporation, becomes the controlling shareholders of a firm is associated with better

corporate governance and higher earnings quality (Claessens et al., 2000a; Claessens et al., 2002; Claessens, 2006; Bona-Sanchez et al., 2014).

On the other hand, the separation of ownership and control also weakens shareholders' capability and could lead to a higher level of agency problems between the managers and shareholders of the firms (Fama and Jensen, 1983), which could lead to higher incentives for management to manipulate earnings (Graham et al., 2005; Chi et al., 2015).

The results in Table 5.10 regarding the relationship between different types of ownership are similar and consistent with the main regression results on ownership concentration. All types of ownership have a positive and statistically significant relationship with the accruals earnings management activities measure, FAM, at the 5% level, while SOE and CORP are significant at the 10% level. However, there is no statistically significant relationship between all types of ownership and the real earnings management activities measure. These results are similar with the ownership concentration (TOP5_OWN) results for the main regression in Table 5.4, which show no statistically significant relationship between TOP5_OWN and the real earnings management activities measure and a positive and statistically significant result, at the 5% level, between TOP5_OWN and the accruals earnings management activities measures.

If we combine these results with the results from Table 5.5 for subsamples of firms with low corporate governance quality, which shows a negative and statistically significant relationship between TOP5_OWN and real earnings management activities (at the 1% level) and a positive and statistically significant relationship between TOP5_OWN and accruals earnings management activities (at the 10% level), and the results from Table 5.6 for subsamples of firms with low audit quality, which shows a negative and statistically significant relationship between TOP5_OWN and real earnings management activities (at the 1% level) and a non-statistically significant relationship between TOP5_OWN and accruals earnings management activities; the assumption is that there is a possibility of controlling shareholders allowing management accruals earnings management activities to a certain extent, since the accruals earnings manipulation do not have an effect on the actual operational activities of the firms (Roychowdhury, 2006), and thus do not have a harmful effect on the long-term financial performance of the firms. However, controlling shareholders would like to protect themselves from real earnings management activities manipulation, which is believed to have a more harmful effect on the long-term financial performance of the firms (Graham et al., 2005; Cohen et al., 2008; Braam et al., 2015).

Table 5-10. Regression results for the effect of different types of ownership on earnings management

	REM	AEM
	1	2
PC-FIT	-0.5291***	-0.0828***
	(0.0378)	(0.0176)
AEM	1.3888***	
	(0.1150)	
REM		0.0781***
		(0.0100)
FAM	-0.0558	0.0309**
	(0.0438)	(0.0122)
SOE	-0.0413	0.0332*
	(0.0623)	(0.0170)
CORP	0.0012	0.0231*
	(0.0465)	(0.0124)
AUD	-0.0243	-0.0068
	(0.0280)	(0.0061)
CG	0.0804	-0.0309
	(0.1456)	(0.0275)
SIZE	0.0167*	-0.0018
	(0.0098)	(0.0021)
AGE	0.0155	0.0071
	(0.0265)	(0.0053)
LEVERAGE	0.0470	-0.0426***
	(0.0640)	(0.0118)
TANG	-0.1337***	-0.0077
	(0.0311)	(0.0069)
CASHHOLD	-0.1771	-0.1744***
	(0.1509)	(0.0290)
ASYM	0.0018	-0.0001
	(0.0013)	(0.0003)
GROW	-0.0562***	0.0013
	(0.0214)	(0.0053)
ROA	-1.2451***	0.1622***
	(0.2987)	(0.0510)
OPCYC	-0.0080	0.0035
	(0.0131)	(0.0028)
LOSS	0.0079	-0.0163**
	(0.0324)	(0.0073)
Cons	0.1776	0.0478
	(0.1597)	(0.0396)
Industry	Included	Included
Year	Included	Included
1st stage regression		
PCTPC_IND	2.0074***	2.7045***
	(0.5102)	(0.6081)
UNEMPRATE	0.6758***	1.1609**
	(0.2410)	(0.4781)
LAG DEP.VAR.	-1.2659***	-0.7286
	(0.1386)	(0.4640)
_cons	-1.0586***	-1.4484***
	(0.2593)	(0.3154)
Fisher's Z (LR)	1.4219***	0.7086***
	(0.0911)	(0.1511)
Ln std.Dev.	-0.9035***	-2.4672***
	(0.0715)	(0.0536)
Number of obs.	1,568	1,576
Wald chi2(29)	556.07***	210.62***
Wald test of indep. eqns.	243.53***	22.00***

Notes: Heckman treatment effect regression using maximum likelihood *t*-statistics calculated based on the robust standard errors clustered at firm-level. REM is the measure of real earnings management activities and AEM is the measure of accrual earnings management activities. PC-FIT is the fitted value of PC variable from the first stage regression with two instrumental variables (PCTPC_IND and UNEMP) and lagged dependent variable. FAM is firms with family as controlling shareholder, SOE is state-owned enterprises and CORP is firms with corporations as controlling shareholder. Columns 1 &2 report regression coefficients and robust standard errors in parentheses. *, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively (two-tailed). Variables definitions are reported in Table 5.1.

5.7 Summary and concluding remark

The main objective of this study is to explore the benefits that may be generated from the governance role of politicians within the firm and how they may act in different settings. The results in this study contribute to the political connection literature by giving evidence to support the accountable behaviour view (stewardship theory) on the relationship between political connectedness and earnings management. In a democratic country with freedom of the press and a requirement for disclosure, political connectedness can become a tool to reduce earnings management manipulation activities, even with the existence of a high level of ownership concentration and a weak institutional setting.

However, the results also suggest that political connectedness alone may not be enough to reduce earnings management activities by firms. There is a complementary relationship between political connections and corporate governance quality, as measured by the corporate governance quality index and the external auditor quality in this study.

Moreover, this study also shows that in the absence of high corporate governance quality and high audit quality, political connections are actually related to the exacerbation of earnings management activities for connected firms. The positive relationship between political connections and earnings management activities in firms with low corporate governance quality support the opportunistic behaviour view (agency theory) on the relationship between political connectedness and earnings management.

While managers' incentives and ability to engage in earnings management activities are somewhat diminished in firms with a high corporate governance quality and a high audit quality, this is not the case in firms with a lower corporate governance quality and a lower audit quality. A lower corporate governance quality indicates a lower internal governance and monitoring process (Cheng et al., 2013b), while a lower auditor quality is associated with less capability to detect questionable accounting practices by the management of the firms (Becker et al., 1998).

In these conditions, managers have more incentives to engage in real earnings management activities without fear of being caught. However, managers may still evade the monitoring process by the supervisory board (board of commissioners), or better still,

managers can try to collude with the board of commissioners to allow the managers' real earnings management activities by offering substantial benefits to the board members in return. These results support the suggestion of a complementary relationship between political connections and corporate governance quality.

This study also gives evidence on the concurrent use of real and earnings management activities, instead of a trade-off between the two different earnings management activities, in a developing country setting like Indonesia. These results contradict previous studies' suggestion that managers in developing countries with a weak and legal investor protection system mainly engage in accruals earnings management activities and that real earnings management activities are not a prevalent problem in this setting.

The results regarding various types of ownership can also contribute to the existing literature on this issue. All types of controlling shareholders (family, state-owned and corporation) are related to a statistically significant higher level of accruals earnings management activities, but there is no statistically significant relationship between all ownership types with real earnings management activities. These results indicate the possibility that to a certain level, controlling shareholders tolerate accruals earnings management activities by managers since they do not really affect firms' operational activities and there are no long-term harmful effects on the firms' financial performance.

The findings from this study could provide the basis for regulators in many countries that experience similar problems regarding the negative impact of political connectedness on earnings management activities as well as for countries that experience institutional setting changes from an autocratic ruler to a more democratic system, such as those in the Middle Eastern, South American, and African regions.

This study is limited in several ways. There is not enough available data from before the 2010 period to conduct a pre- and post-financial crisis comparison. The hand-collected data is limited to a six-year period from 2010 to 2015 since the readily available and completed data at the time of data collection was limited to the 2015 period, and further expansion to a latter period is not feasible without endangering the completion of the research process in due time.

The limitation of the available data also makes us unable to investigate more robust relationships in terms of specific corporate governance features, such as the role of the internal auditor on mitigating earnings management activities in politically connected and non-connected firms, the relationship between external auditor fees and earnings management activities in politically connected and non-connected firms, the effect of

board remuneration on earnings management activities, etc. Future studies could explore and investigates these issues further when more data and information is available.

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CHAPTER 6

THE RELATIONSHIP BETWEEN POLITICAL CONNECTIONS AND INVESTMENT INEFFICIENCY

6 The relationship between political connections and investment inefficiency

6.1 Introduction

Corporate investment is an important issue for firms, capital markets and governments. Successful investment projects increase shareholders' wealth, drive firm growth and provide a foundation for a firm's long-term sustainability (Ward et al., 2017; Naeem and Li, 2019). Corporate investment is also a critical factor that influences capital market activity and economic growth (Cleary, 2006; Song et al., 2015). The essence of a firm's investment strategy is not only the amount of investment or the number of employees in the investment department, but also the effectiveness and efficiency of the investment projects, as is evident from the following anecdotal example from the mobile phone industry.

Nokia Corporation (NOK) was the leading player with a 49.4% market share in the global mobile phone industry in 2007, when Apple Inc. (AAPL) – previously known as a personal computer manufacturer – launched its first mobile phone product, the iPhone. Within just a 6-year period, Nokia's market share fell rapidly to just over 3% in 2013, and Nokia mobile phone division was sold to Microsoft (Lee, 2013), while Apple remains one of the major players in the mobile phone global market today.[29]

Nokia's fall from grace was not the result of a lack of investment or investment division personnel[30] but rather an inefficient investment strategy. Nokia's management team put the emphasis on numbers, even after Nokia lost its domination of the mobile phone market.[31] Meanwhile, Apple's management team put the emphasis on the numbers of new innovations (thousands of patent applications around the world to protect their inventions), since the management teams believed that 'continuous and timely introduction of new innovative products and technologies' would be the only way to guarantee the firm's long-term survival.[32]

The literature suggests that there are several factors that influence firms' investment decisions and investment efficiency: ownership structure (Chen and Hsu, 2009; Chen et

[29] Passport GMID Mobile Phones Company Shares Report indicates that AAPL steadily held around 11% of the world market share of mobile phone in 2014-2018 period

[30] Nokia's management team allocated 5.6 billion euros (± 3.9 billion USD) – 11.1% of its revenue – for investments (R&D) in the 2007 fiscal year and hired more than 30 thousand employees in its R&D division (NOKIA Corporation Annual Report 2007), while Apple's investment spending for the same period is only 782 million USD – 3.26% of its revenue – and the total number of the entire Apple Inc. employee workforce (21,600) is still below the total number of Nokia's investment division alone (APPLE Inc Annual Report 2007).

[31] Nokia's annual report for the 2010 period still boasted about the number of employees in their R&D divisions (which had reached 35,000 by this period) and the increased volume of mobile phone units sold, even though their profits and market shares were falling.

[32] APPLE Inc Annual Report 2007 & 2010

al., 2011c; Anderson et al., 2012; Chen et al., 2017a; Chen et al., 2017b), agency problems (Richardson, 2006; Chen et al., 2011c; Chen et al., 2016; Guariglia and Yang, 2016; Naeem and Li, 2019), financial constraint (Cleary, 2006; Almeida and Campello, 2007; Song et al., 2015; Guariglia and Yang, 2016; Shen and Lin, 2016; Naeem and Li, 2019), financial reporting quality (Biddle et al., 2009), accounting conservatism (Lara et al., 2016), market competition (Laksmana and Yang, 2015), financial development (Naeem and Li, 2019), and political connections (Leuz and Oberholzer-Gee, 2006; Xu et al., 2013; Zhou, 2013; An et al., 2016; Ling et al., 2016; Shen and Lin, 2016; Pan and Tian, 2017; Saeed et al., 2017).

Regarding ownership structure, previous studies suggest that family ownership is associated with risk aversion and a lower level of investment in research and development (R&D) (Chen and Hsu, 2009; Anderson et al., 2012). Meanwhile, government ownership is associated with a higher level of investment inefficiency (Chen et al., 2011c; Chen et al., 2017a; Chen et al., 2017b).

The effects of free cash flow and financial constraints on investment efficiency are like the two sides of the same coin. On the one hand, firms with a higher level of free cash flow are usually firms with low financial constraints, and they are more likely to face over-investment inefficiency problems (Cleary, 2006; Richardson, 2006; Chen et al., 2016; Guariglia and Yang, 2016). On the other hand, firms with a higher level of financial constraints are usually firms with a low level of free cash flow, and they are more likely to face problems of under-investment (Cleary, 2006; Almeida and Campello, 2007; Guariglia and Yang, 2016). The next four factors, namely financial reporting quality (Biddle et al., 2009), accounting conservatism (Lara et al., 2016), market competition (Laksmana and Yang, 2015) and financial development (Naeem and Li, 2019), are associated with the reduction of investment inefficiency.

The literature on the behaviour of politicians in politically connected firms provides two contrasting views. The first view places politicians as rent-seeking actors that use their position and power to maximise their own interest and utilities above others (Krueger, 1974; Morck and Yeung, 2004). On the other hand, the second view puts politicians as responsible people who care about their constituents, about their policy and about improving the welfare of the nation they serve (Wittman, 1977; Alesina, 1988).

However, the results from the literature regarding the relationship between political connectedness and firm-level investment inefficiency so far only support the rent-seeking behaviour of politicians. Politicians extracted rent from firms and ask the firms to engage in non-productive investment projects. As a result, it is found that politically connected

firms have a higher level of debt, have a lower level of profitability and are more prone to over-investment than non-connected firms (Ling et al., 2016; Hou et al., 2017). Moreover, political connections are related to a higher level of investment inefficiency (Chen et al., 2017a; Saeed et al., 2017).

The rent-seeking behaviour by politicians in politically connected firms is influenced by the institutional setting. In countries with weak legal enforcement and investor protection system and a high level of corruption, where a considerable amount of economic resources is controlled by a small number of oligarchic groups (Morck et al., 2005), political connections become one of the main tools for politicians and business owners to extract maximum benefits from their rent-seeking activities (Faccio, 2006; Faccio, 2010; Boubakri et al., 2012b).

However, the literature also suggests several factors that can influence politicians' behaviour to become more responsible and avoid rent-seeking activities. These factors are a democratic political system – marked by free, fair and regular elections – (Adsera et al., 2003; Lederman et al., 2005; Djankov et al., 2010); freedom of the press (Adsera et al., 2003; Brunetti and Weder, 2003; Lederman et al., 2005; Djankov et al., 2010); a higher level of transparency and disclosure by politicians (Adsera et al., 2003; Djankov et al., 2010); and political accountability, that is, the existence of a checks and balance system that provides punishment for wrong actions by politicians, such as corruption and rent-seeking activities (Adsera et al., 2003; Lederman et al., 2005).

Indonesia presents a unique setting in which to examine the relationship between political connections and firm-level investment inefficiency for several reasons. First, as a developing country, Indonesia shares similar institutional settings that can contribute to the rent-seeking behaviour by politicians, such as weak legal enforcement and investor protection system (Claessens and Fan, 2002), a high level of corruption (Claessens et al., 2000a; Fisman, 2001), and a high concentration of economic resources in the hands of a few oligarchic business groups (Pusat Data Business Indonesia, 1997; Claessens et al., 2000a).[33]

However, since the Asian financial crisis of 1997-1998, Indonesia has also had the essential elements required to make politicians act responsibly and be accountable for their actions, such as a democratic political system with fair and regular elections (Horowitz, 2013); a free press (Hanitzsch, 2005; Steele, 2012; Tapsell, 2015);

[33] The total assets of the top five business groups with strong political connections (Salim, Sinar Mas, Gajah Tunggal, Astra and Lippo) account for 25% of Indonesia's GDP in 1996 while the total sales revenue of these groups in 1996 account for about 11% of Indonesia's GDP for the same year

transparency requirements regarding public officials' wealth and its sources (Rahayuningsih, 2013); and an effective anti-corruption agency with 100% conviction rates and higher punishments than a normal anti-corruption court (Choi, 2011; Schütte, 2012).

While the changes in the political system and financial institutional reform managed to improve the investor protection system and reduce the level of corruption,[34] post-reform Indonesia is still not regarded as a country with a strong legal enforcement and investor protection system (Leuz and Oberholzer-Gee, 2006; Enomoto et al., 2015). Moreover, the presence of large business groups that control a considerable amount of economic resources is still common in Indonesia (Carney and Child, 2013; Carney and Hamilton-Hart, 2015).

Second, the nature of political connections in Indonesia also differs slightly from the existing studies on the political connections topic. Political connections in many country settings, either developed or developing countries, involve current/incumbent politicians, such as current members of parliament in the US (Goldman et al., 2009; Goldman et al., 2013; Pham, 2019), current members of parliament in Germany (Niessen and Ruenzi, 2010); current members of parliament in Denmark (Amore and Bennedsen, 2013); a current prime minister and winning party officials in the government of Pakistan (Belghitar et al., 2019); the president and his/her networks in South Korea (Schoenherr, 2019)' current officials from the only political party in China (Fan et al., 2007; Jun and Girma, 2010; Wu et al., 2012a; Pan and Tian, 2017; Huang et al., 2019); and royal families that hold ruling power in Gulf countries (Al-Hadi et al., 2016).

The Indonesian government law prohibits current officials from having any business relationship, and businessmen appointed as officials, such as ministers or heads of government institutions, must relinquish their position in the firm (Indonesian Government, 2009).[35] The majority of politicians who are appointed as politically connected board members are ex-ministers, ex-military/police generals and ex high-ranking officials.[36] Unlike in many countries where connected board members are

[34] Indonesia climbed from the 100th percentile (most corrupt) in 1995 to the 51st percentile (middle) in 2016 on the Transparency International Corruption Perception Index. Indonesia's capital market also grew from 260 billion rupiahs (26.8 million USD) to 4.9 trillion rupiahs (358 million USD) in the 2000-2015 period, which indicates the improved level of investors' trust in Indonesia.

[35] While the law does not prohibit current members of parliament from having business or holding board positions in business firms, only about 3% of firms in our sample had a relationship with an active/current member of parliament during our sampling period.

[36] We include the appointment of ex-military and police generals as politically connected board members since these generals have vast access to government networks and resources, as well as an important role in business society (McCulloch, 2003). In the current cabinet, there are six out of thirty-four ministers (18%)

incumbent politicians, connected board members in Indonesia do not have official power to create a regulation or to divert government resources to specifically benefit a certain firm. However, these connected board members might still offer valuable insight into the government's medium and long-term planning, and firms can mould their investment strategies based on this planning (González-Bailon et al., 2013). Several examples show how connected firms can change their core business strategy to support government planning.[37]

Post-reform Indonesia also required high-ranking civil servants and public officials[38] to disclose their wealth before, during and after their appointment as civil servants/public officials (Indonesian Government, 1999), as well as to update their wealth report every two years or after promotion or appointment to other governmental institutions (Corruption Eradication Commission, 2005). These regulations have helped to elect responsible personnel with a clean track record for high-ranking governmental institutions and ensure a working principle of checks and balances in governmental institutions (Schütte, 2011). Moreover, the existence of an effective anti-corruption body and improvement in legal enforcement, and corruption cases involving these connected board members will result in dismissal from the board member position and prison time.[39]

While it does not bring significant power to change regulations or divert government resources, the appointment of former politicians also eliminates the need for firms to invest in unwanted government projects or to hire an excessive amount of employees to help the politicians in power (Chen et al., 2011c; Chen et al., 2017a; Saeed et al., 2017).

Moreover, the limited amount of board membership positions for listed firms in Indonesia creates a market for independent board of commissioners positions, where the

who are ex-military/police generals. Previous studies also acknowledge the role of ex-military/police general as connected board members in the Indonesian setting (Habib et al., 2017b; Habib et al., 2017a)

[37] AKRA was formed as a chemical trading in 1977 but changed its core business to distribution and logistics in 2004, along with a contract to supply petroleum from the state-owned oil company Pertamina to various part of Indonesia. As of 2015, around 94.5% of the firm's revenue comes from distribution segment, with petroleum supply as the major contributor. BRPT was formed as an integrated wood company in 1979 but changed its core business to petrochemical production in 2007, in accordance with government plans to reduce dependency on petrochemical imports. As of 2015, around 98% of the firm's revenue came from petrochemical manufacturing. While the investments in the petrochemical companies were still making losses up to 2015 fiscal period, it they gave profit for three straight years afterwards (2016-2018).

[38] This includes members of the senate (MPR) and parliament (DPR), head of government institutions, governors, ministers, judges, state-owned enterprises' board members, head of the central bank, state university deans, attorneys, first echelon/highest ranking officials in government institutions, military and police institutions, and government project leaders and treasurers.

[39] There are two examples of this situation in our sample: Irman Gusman (2016) and Patrialis Akbar (2016), an active parliament member (at the time of conviction) and a former minister who were indicted for graft cases and are serving jail sentences for their actions.

candidates who want to fill these positions need to showcase their quality in order to be appointed by the shareholders (Dahya et al., 2008).

As such, we believe that unlike in previous studies results, the appointment of politically connected board members in Indonesia's current setting would be beneficial for firm investment strategies. Because of that, the results from this study will fill the gap in the literature by providing evidence to support the view that political connectedness can actually reduce the overall level of investment inefficiency, reducing both the problems of over-investment and under-investment for firms.

To investigate the relationship between political connections and firm-level investment inefficiency in the Indonesian setting, this study follows Richardson's (2006) model to measure the level of inefficient investment of a firm using a residual value of the investment model. This is the most comprehensive model currently in existence, and it has been used in previous studies, such as Guariglia and Yang (2016), Ling et al. (2016), and Chen et al. (2017a). We also include the Biddle model (Biddle et al., 2009) and the median industry value from the Richardson model as a robustness check.

Using a large dataset from Indonesia over 2010-2015, the results show, consistent with our prediction, a strong and significant relationship between political connections and the reduction of firm-level investment inefficiency. In addition, the results show that political connections are as effective in reducing both over-investment and under-investment inefficiency, although the relationship is statistically stronger for under-investment inefficiency.

Further decomposition of the firm samples into higher corporate governance quality and lower corporate governance quality shows a complementary relationship between political connections and corporate governance quality. Political connectedness only has a strong and statistically significant effect of reducing investment inefficiency in firms with a high corporate governance quality, and no statistically significant relationship in firms with a low corporate governance quality.

Further subsample analysis to test the relationship between political connections and financial constraints also strengthens the argument that political connectedness in Indonesia can become a corporate governance tool to reduce investment inefficiency. Political connectedness has a negative and statistically significant relationship with all investment inefficiency measures for financially unconstrained firms and for firms with a higher level of information asymmetry, and no statistically significant relationship in firms with financial constraints and firms with a lower level of information asymmetry.

The results of this study contribute to the literature on political connections and firm-level investment inefficiency in several ways. First, this is the first study to provide evidence on the responsible behaviour of politicians, even in a developing country with a weak legal and investor protection system, as well as a high level of ownership concentration. As a result of responsible behaviour, having political connections reduces firms investment inefficiency, either in the form of over-investment, under-investment or overall level of investment inefficiency. The results are markedly different from previous studies which suggest that political connections are related to over-investment (Ling et al., 2016; Hou et al., 2017) and a higher level of investment inefficiency (Chen et al., 2017a; Saeed et al., 2017).

Second, this study shows a complementary relationship between political connections and corporate governance quality regarding investment inefficiency. This result is different from previous studies' results where political connections were assumed to be a substitute for corporate governance quality (Leuz and Oberholzer-Gee, 2006; Yeh et al., 2013).

Third, this study also shows that the involvement of controlling shareholders as board members of a firm may actually have a positive effect on reducing investment inefficiency, especially under-investment inefficiency. This result supports stewardship theory (Davis et al., 1997) and shows that large and dominant controlling shareholders can act responsibly when the environmental setting suits them (Bona-Sanchez et al., 2014).

The rest of this chapter is organised as follows. Section 6.2 discusses a brief background of Indonesia's institutional settings, while Section 6.3 provides the literature review and hypothesis development. Section 6.4 presents the measurement of the dependent variable and empirical models. Section 6.5 reports the univariate analysis, regression results and analyses. The various decomposition tests and robustness checks that are conducted are summarised in Section 6.6. Finally, Section 6.7 concludes the study.

6.2 Background

Political connections played an important role in determining connected firms' investment strategies in Indonesia during Soeharto's government period (1966-1998). A connected firm can be granted a preferred or monopoly position in a profitable industry

with minimum effort and funds[40], or it can be asked to invest in a specific industry at the request of politicians.[41]

Another characteristic that usually emerges in a rent-seeking society is the concentration of vast economic resources in the hands of a few. The total assets of the top five business groups with strong political connections (Salim, Sinar Mas, Gajah Tunggal, Astra and Lippo) accounted for 25% of Indonesia's GDP in 1996 while the total sales revenue of these groups in 1996 accounted for about 11% of Indonesia's GDP for the same year (Pusat Data Business Indonesia, 1997).

The level of over-investment by politically connected firms in Indonesia rose dramatically in the eight-year period before the financial crisis due to massive deliberation of the banking and financial sector in Indonesia. One of the important factors that contributed to the rapid growth of the Indonesian business group during the 1988-1996 period is the deliberation of the banking sector in October 1988. This made it easier for business groups to have their own bank, with only 10 billion rupiahs (± 5 million USD) required to set up a new bank. Much of the public funds acquired from these banks were then given as credit loans to affiliated firms to finance expansion projects (Indrawati, 2002; Pangestu, 2003). There was also abuse by state-owned banks, which were forced to fund high-risk and poorly governed investment projects by the president's cronies (Indrawati, 2002)[42].

Moreover, Indonesian business groups were also using foreign funding as a source for their business expansion, since the fix-rate fiscal regime of the Indonesian government at the time meant it was cheaper to borrow from foreign sources than from domestic sources (Fane and McLeod, 2002; Indrawati, 2002; Pangestu, 2003). The ease of acquiring cheap and abundant funding led to over-investment activities by many big business owners, some of which went to long-term investment projects, such as the

[40] Borsuk and Chng (2014) provide an anecdotal example of this power in the case of the coalition between Soeharto and the Salim Group in the establishment of Bogasari Flour Mills, a wheat milling company (whereby the Salim Group held the only rights for importing wheat to Indonesia) in May 1969. The firm was founded with 100 million rupiahs (±$ 238,000 at that time) of registered capital and then received 2.8 billion rupiahs (±$ 6.67 million at that time) credit from state-owned banks only 5 (five) days after its establishment. Furthermore, its article of association required the firm to donate 26% of its profit to a foundation chaired by Soeharto's wife.

[41] Another anecdotal example to support this view is provided by Borsuk and Chng (2014) in chapter 9 of their book, Cement Build-up and Bailout(pp.184-208). The Salim Group undertook an investment in cement manufacturing upon the request of President Soeharto. Over-investment, combined with a miscalculation of global economic growth, created a situation where "aggressive expansion was completed at a time demand dropped like a rock" (Borsuk and Chng, 2014, 189). The Salim Group escaped the financial trouble caused by this situation via a government bailout scheme. Soeharto issued a decree that supplied the Salim Group's cement company with a 364 billion rupiahs (±326 million USD) fund in exchange for 35% of the firm's share, without demanding voting rights on the investment.

[42] As is evident from the examples in notes 9 and 10

property and real estate sectors, where 25-30% of the bank credits were given (Quigley, 2001).

The combinations of banking sector deregulation, which imploded due to the abuse of public funds by conglomerate business groups (Indrawati, 2002; Pangestu, 2003; Dowling and Yap, 2008), the vulnerable balance of a payment structure heavily reliant on foreign debts and short-term foreign direct investment, pervasive monopoly, oligopoly and unfair competition (Indrawati, 2002) lead to financial ruin that cost an estimated 134 million people their jobs and led to 700 trillion rupiahs (± 70 billion USD) in government bailout costs for Indonesia's banking system.

To fund the bailout and restore the economic conditions, the Indonesian government entered into an agreement with the International Monetary Fund (IMF) in October 1997. The IMF aid packages for Indonesia entailed the requirement for significant institutional reform, involving very comprehensive macroeconomic measures (base money and fiscal deficit targets, structural reforms in the real sectors by removing trade and investment barriers) and financial sector restructuring (Pangestu, 2003)

The financial sector institutional reform combined with political reform improved the corporate governance practices in Indonesia. The improvement of corporate governance in Indonesia can be seen in the adoption of IFRS, the creation of a national corporate governance body and the Indonesian Corporate Governance Manual, the implementation of new laws that improve investor protection, and increased disclosures by firms and politicians.

Moreover, all business groups with strong political connections lost their ownership of the banks they owned. Salim Group's BCA is now owned by Djarum Group; Sinar Mas BII is now owned by Maybank, which changed its name to Bank Maybank Indonesia; Gajah Tunggal BDNI was liquidated in 1998; Bank Summa, which was owned by Astra's founder son, was liquidated in 1992, five years before the crisis, and the main reason for Astra's takeover since Astra's founder had to sell his shares of Astra International as payment for Bank Summa customers; Lippo group's Bank Lippo was taken by another Malaysian financial group, CIMB, and is now CIMB Niaga.

While all of these groups still own other banks (the Salim Group still has Bank Windu Kentjana) or built new ones (Bank Sinar Mas for the Sinar Mas Group, Bank Permata for the ex-Astra Group and Bank Nobu for the Lippo Group), these banks are not as big as their previous banks in terms of capital, customers and capacity. Another significant change relates to the power of political connections in Indonesia. Before the financial crisis, political connectedness to President Soeharto equated to access to

government policy and government resources that would greatly benefit connected firms (Leuz and Oberholzer-Gee, 2006; Dieleman and Sachs, 2008; Borsuk and Chng, 2014) since Soeharto wielded almost absolute power as president (Crouch, 1980; Race, 1980; Fisman, 2001; Borsuk and Chng, 2014).

After the financial crisis, the position of the president of Indonesia after the reform is on par with the legislative and judicative powers, and the three branches have independent authority in their respective fields (Crouch, 2010). The centralistic, authoritarian, and militaristic political powers are being replaced by decentralist, democratic and civil political powers (Booth, 2005).

Moreover, high-ranking civil servants (president, ministers, heads of ministerial departments, heads of government institutions, high-ranking government officials, governors and mayors) are prohibited from having a board membership position in a business firm while holding their respective positions, unless as a representative of the government on the board of commissioners of state-owned enterprises (SOE).[43] As a result, all of the politically connected board members (excluding SOEs) in our samples are retired ministers, retired high-ranking officials and retired-military/police generals and not active ministers, high-ranking officials or military/police generals.

6.3 Literature review and hypothesis development

6.3.1 Political connections and investment inefficiency

In many countries, especially developing countries, political connectedness is one of the essential factors that influence firms' investment activities and strategies. However, political connectedness can also act as a double-edged sword for firms. On the one hand, political connections provide access to precious resources such as land, capital, and licenses (Ling et al., 2016), favourable policies that reduce market competition (Hou et al., 2017), and funding (Ling et al., 2016; Hou et al., 2017; Saeed et al., 2017).

On the other hand, the rent extraction required to maintain the connections may reduce the research and development budget (Hou et al., 2017), forcing firms into unwanted investment projects or make them have an excessive level of employment (Chen et al., 2011c; Chen et al., 2017a; Saeed et al., 2017), which results in low operating efficiency (Saeed et al., 2017), low profitability (Ling et al., 2016) and a high level of inefficient investments (Chen et al., 2011c; Ling et al., 2016; Chen et al., 2017a; Hou et al., 2017; Saeed et al., 2017).

[43] This restriction is stated in Indonesian Government Law No.25 Regarding Public Service (2009)

The literature also suggests that there are two behavioural views regarding politicians' attitude in politically connected firms. Politicians in connected firms can be rent-seeking actors who use their position and power to maximise their own interest and utilities above others (Krueger, 1974; Morck and Yeung, 2004) or responsible people who care about their constituents, about their policy and about improving the welfare of the nation they serve (Wittman, 1977; Alesina, 1988). Politicians' rent-seeking activities increase investment inefficiency while politicians' accountable activities reduce investment inefficiency.

While previous studies have analysed the relationship between political connections and investment inefficiency, none have provided evidence to support the accountable politician view. So far, the literature on the relationship between political connections and investment inefficiency only supports the rent-seeking politician view. Ling et al. (2016) find that politically connected firms are more likely to over-invest, have a higher level of long-term debt and a lower level of profitability. Similarly, Chen et al. (2011c), Chen et al. (2017a) and Saeed et al. (2017) find that political connections increase investment inefficiency and reduce operational efficiencies. Moreover, Hou et al. (2017) suggest that political connectedness not only increases over-investment, but it also reduces market competition and stifled innovations.

The behaviour of politicians in politically connected firms is largely influenced by the country's environmental settings. On the one hand, in countries with a weak investor protection system and an authoritarian ruler, powerful politicians use firms as a tool for rent-extraction that benefits themselves and a handful of selected business owners (Morck et al., 2005). On the other hand, in countries with a strong investor protection system and a democratic government, politicians are under public scrutiny and are held accountable for their actions (Lederman et al., 2005).

The literature suggests that there are several essential elements that improve government quality and hold the politicians accountable for their actions, such as regular democratic elections (Adsera et al., 2003; Lederman et al., 2005; Djankov et al., 2010), freedom of the press (Adsera et al., 2003; Brunetti and Weder, 2003; Lederman et al., 2005), and punishment for unruly behaviour such as corruption (Lederman et al., 2005).

While Indonesia is still considered as a country with weak legal enforcement and investor protection system (Claessens and Fan, 2002; Leuz and Oberholzer-Gee, 2006; Enomoto et al., 2015), all of the other necessary elements required to hold the politicians accountable such as democratic elections (Horowitz, 2013), a free press (Hanitzsch, 2005; Steele, 2012; Tapsell, 2015), transparency of wealth for public officials (Rahayuningsih,

2013) and the establishment of an effective anti-corruption agency (Choi, 2011; Schütte, 2012) currently exist in Indonesia.

Moreover, the regulation regarding public service also eliminates the possibility of firms appointing active ministers or civil servants, who arguably have more influence on deciding government policies than former ministers or civil servants. However, while these appointed politicians may not have the power to shape or strongly influence government policies, they can still relay valuable government medium and long-term planning that would be useful to improve a firm's investment strategies and activities (González-Bailon et al., 2013).

Based on those explanations, the corresponding testable hypothesis is:

Hypothesis 1*: Political connectedness is negatively related to firms' investment inefficiency*

Using the absolute values of Richardson's (2006) model enables us to measure the magnitude of investment inefficiency, whether it be over-investment or under-investment problems (Chen et al., 2017a; Ward et al., 2017). However, several studies suggest that while the factors influencing over-investment and under-investment problems may be similar, each subset of the investment inefficiency problem has its own distinct, and sometimes contrasting, characteristics (Cleary, 2006; Richardson, 2006; Almeida and Campello, 2007; Chen et al., 2016; Guariglia and Yang, 2016).

The first distinction between the over and under-investment inefficiency problems is the effect of free cash flow and financial constraints. A higher level of free cash flow indicates no financial constraints for a firm, while firms with financial constraints tend to have a lower level of free cash flow (Fazzari et al., 1998; Almeida and Campello, 2007; Guariglia and Yang, 2016).

Firms with a higher level of free cash flow and no financial constraints are more likely to face over-investment inefficiency problems, and the level of over-investment inefficiency could increase with higher levels of agency problems between managers and shareholders of the firms (Guariglia and Yang, 2016; Naeem and Li, 2019). On the other hand, firms with financial constraints and a low level of free cash flow are more likely to face under-investment inefficiency problems (Cleary, 2006; Almeida and Campello, 2007; Guariglia and Yang, 2016; Naeem and Li, 2019).

The second distinction between the over and under-investment inefficiency problems is the effect of political connections. On the one hand, financially constrained firms may use political connectedness to alleviate their financial constraints and remove

the under-investment inefficiency problem (Xu et al., 2013; Song et al., 2015; Shen and Lin, 2016). However, the trade-off from the alleviation of financial constraints via political connectedness is the problem of over-investment (Chen et al., 2011c; Chen et al., 2016; Ling et al., 2016; Hou et al., 2017; Saeed et al., 2017).

Central to the relationship between political connections and over-investment is the argument that politically connected board members use their power and influence to provide connected firms with access to precious government-controlled resources (Ling et al., 2016), create favourable policies for connected firms (Hou et al., 2017), and provide preferential access to funding for connected firms (Ling et al., 2016; Hou et al., 2017; Saeed et al., 2017).

In return, the politicians may demand that connected firms engage in unwanted investment projects (Chen et al., 2011c; Chen et al., 2017a; Saeed et al., 2017) or hire more employees than necessary in order to reduce unemployment levels and increase the popularity of the politicians (Wu et al., 2012b; Saeed et al., 2017). The benefits from favourable government policies may also lead to complacency and the inefficient allocation of research and development budgets, thereby stifling innovation (Song et al., 2015; Hou et al., 2017).

The appointment of former instead of current politicians as board members in politically connected firms greatly diminishes the power of the connected board member in influencing government policies or in providing connected firms access to government-controlled resources. However, it also eliminates the demand that comes from those benefits. Firms appoint former politicians as board members in the hope that these board members provide knowledge of the policy process and procurement and government planning (Goldman et al., 2013), bring their political network and technical expertise to the boardroom, and have knowledge of the inner workings of politics and the government (González-Bailon et al., 2013). Dominant shareholders may also appoint former politicians as board members as a signal of their commitment to improve transparency and to improve financial reporting quality (Bona-Sanchez et al., 2014).

If appointed politically connected board members act responsibly and perform their task effectively, the combination of technical expertise, the knowledge of the government's policy process and long-term planning projects as well as of the inner workings of politics, the government, and the political networks combined with responsible action by the connected board members will lead to a lower level of investment inefficiency, regarding both the over-investment and under-investment problems.

As such, the corresponding testable hypotheses are:

Hypothesis 2a*: Political connectedness is negatively related to firms' over-investment inefficiency*

Hypothesis 2b*: Political connectedness is negatively related to firms' under-investment inefficiency*

6.3.2 The joint effect of political connections and corporate governance quality on investment inefficiency

Previous studies suggest that political connections and corporate governance have a contradicting effect on firms' investment efficiency. While political connections are associated with a lower level of investment efficiency (Ling et al., 2016; Chen et al., 2017a; Chen et al., 2017b; Hou et al., 2017; Saeed et al., 2017), improvement in corporate governance is associated with a higher level of investment efficiency (Chen et al., 2011b; Chen and Chen, 2012; Cheng et al., 2013a; Chen et al., 2016).

Previous studies also suggest that in some cases, political connectedness negates the necessity of improving corporate governance quality for firms. In other words, political connections become a substitute for corporate governance. Politically connected firms with poor earnings quality still enjoy easier access to lending (Boubakri et al., 2012a), lower cost of debt (Chaney et al., 2011) and cost of equity (Boubakri et al., 2012b). However, as we mentioned earlier in this chapter, these results only support the political rent-seeking theory, while there is actually a second theory regarding political connectedness: the political integrity/accountable politician theory.

According to Chaney et al. (2011), higher levels of transparency and scrutiny towards politically connected firms should improve the corporate governance quality of connected firms. If political connectedness improves corporate governance quality, then there should be a complementary relationship between political connections and corporate governance quality. However, so far, the literature has not been able to provide any evidence to support this notion.

The reason for this situation is that in all of the research that finds political connections serving as a substitute to corporate governance quality, the politicians and connected firms have more to lose in improving corporate governance quality and also benefit from the obscurity and ambiguous nature of poor earnings quality (Chaney et al., 2011; Yeh et al., 2013).

In Indonesia, although the appointment of politically connected board members is highly influenced by the controlling shareholders, most of these connected board members (78%) are appointed as independent commissioners (non-executive directors). The main duties of independent commissioners are to monitor management activities and to protect the interest of shareholders, especially minority shareholders. In many cases, independent board members are one of the elements used to measure corporate governance quality (Chen and Jaggi, 2001; Dahya et al., 2008; Jaggi et al., 2009; Chen et al., 2015; Liu et al., 2015b).

The appointment of politically connected board members with a sound reputation and considerable knowledge in Indonesia becomes one of the signals of the controlling shareholders' commitment to improving the corporate governance quality (Klapper and Love, 2004; Durnev and Kim, 2005; Renders and Gaeremynck, 2012; González-Bailon et al., 2013).

Based on this notion, the corresponding testable hypothesis is:

Hypothesis 3*: The negative relationship between political connectedness and firms' investment inefficiency is more pronounced in firms with high corporate governance quality*

6.3.3 The joint effect of political connections and financial constraints on investment inefficiency

According to Cleary (2006), financial constraints play an influential role in determining firms' investment decision-making. The literature suggests that firms with financial constraints are more likely to face a higher level of inefficient investment, especially in the form of under-investment (Almeida and Campello, 2007; Guariglia and Yang, 2016; Naeem and Li, 2019).

The literature also suggests that having political connections usually helps to alleviate firms' financial constraints (Xu et al., 2013; Song et al., 2015; Shen and Lin, 2016). However, the alleviation of financial constraints through political connections also results in another problem of investment inefficiency, that of over-investment (Ling et al., 2016; Chen et al., 2017a; Chen et al., 2017b; Hou et al., 2017; Saeed et al., 2017).

This situation occurs because in exchange for access to precious resources (Ling et al., 2016), favourable policies (Hou et al., 2017), and easier access to funding (Ling et al., 2016; Hou et al., 2017; Saeed et al., 2017) provided by political connectedness, firms must undertake inefficient government projects (Chen et al., 2017b; Hou et al., 2017) or

hire more employees than actually needed to help politicians gain public support (Saeed et al., 2017). Easy access to funding also encourages connected firms to borrow more, which leads to managerial overconfidence and a higher level of over-investment inefficiency (Ling et al., 2016).

The settings which lead to political connectedness being able to divert government resources and policies to benefit connected firms imply a certain level of power from the politicians. Only firms with connections to the winning or ruling party are able to access these benefits, and not firms with connections to a losing party or a former party of power (Shen and Lin, 2016).

The more powerful the level of connections, the stronger the impact of having political connections will be in terms of both costs and benefits. Connections to a winning party have a stronger effect than connections to individual winning politicians (Belghitar et al., 2019). Connections via top management team members who hold high political party or official government positions are stronger than connections via party membership or political donations (Shen and Lin, 2016). Connections via the top political power of a country, such as the president, could guarantee a systematic allocation of significant resources to politically connected firms (Schoenherr, 2019).

In Indonesia, the situation is slightly different than in previous research. Political connectedness exists mainly via controlling shareholders instead of top management teams. There are no connections to active high-ranking government/military officials or the presidential position in the connected firms since these are prohibited by the regulation. This situation diminishes the possibility of having favourable government policies (Hou et al., 2017) or access to precious government resources (Ling et al., 2016) for connected firms in Indonesia. Moreover, politically connected Indonesian firms are no longer able to get preferential treatment from state-owned banks (Leuz and Oberholzer-Gee, 2006) or their own banks[44] for funding (Pangestu, 2003).

As a result, on the one hand, this means that political connections in Indonesia may not have any significant effect in reducing the financial constraints of connected firms. On the other hand, it also means that connected firms are liberated from the burden of the requirement to undertake unwanted government projects or have excess levels of employment to boost the politicians' popularity.

[44] The deregulation of the banking sector in October 1988 in Indonesia has made it easier for business groups to have their own bank, with only 10 billion rupiahs (± 5 million USD) required to set up a new bank. The public funds acquired from these banks are then given as credit loans to affiliated firms (Indrawati, 2002; Pangestu, 2003).

There is no evidence that connected firms are required to engage in unwanted investment projects or excess levels of employment that would usually come with political connections. Moreover, in the previous section, we discuss how political connections in Indonesia would most likely be related to the reduction of investment inefficiency, especially the over-investment inefficiency problem, and would possibly have a complementary relationship with corporate governance quality. As such, the corresponding testable hypothesis is:

Hypothesis 4*: The negative relationship between political connectedness and firms' investment inefficiency is more pronounced in firms without financial constraints*

6.3.4 The joint effect of political connections and information asymmetry on investment inefficiency

The literature suggests a positive relationship between information asymmetry and investment inefficiency. Firms with a higher level of information asymmetry between managers and shareholders (Biddle et al., 2009) or between majority and minority shareholders (Park et al., 2016; Chen et al., 2017b) are associated with a higher level of investment inefficiency. Information asymmetry between insiders (managers and managers with controlling shareholders) and outsiders (investors and creditors) creates the possibility of adverse selection and moral hazard (Stein, 2003).

With adverse selection, since a firm's insiders are better informed than outside investors with regard to future growth opportunities and a firm's assets true value. Managers (and controlling shareholders) have greater incentives to issue capital when the firm is overvalued and to use the proceeds for inefficient investment projects (Cheng et al., 2013a). With moral hazard, managers (and controlling shareholders) may provide manipulative information to investors, such as over-stating revenue or under-stating costs, to get investors' support for their investment projects, which also leads to a higher level of investment inefficiency (Aerts et al., 2013). However, the literature also suggests that the improvement of corporate governance quality, transparency, financial reporting quality and investor protection could help to mitigate the problem of inefficient investment (Chen et al., 2017b).

Consistent with the main hypothesis, if political connections in Indonesia are associated with the reduction of investment inefficiency, then as well as having a complementary relationship with corporate governance quality, political connectedness

should have a stronger effect on reducing investment inefficiency in firms with a higher level of information asymmetry, since the improvement of corporate governance quality, transparency and financial reporting quality already plays an influential role in reducing investment inefficiency for firms with a lower level of information asymmetry.

Therefore, the corresponding testable hypothesis is:

Hypothesis 5*: The negative relationship between political connectedness and firms' investment inefficiency is more pronounced in firms with higher level of information asymmetry*

6.4 Research design

6.4.1 Measurement of investment inefficiency

There are several models used in the literature to measure investment efficiency, such as Richardson's (2006) model, Biddle et al.'s (2009) model and McNichols and Stubben's (2008) model. Out of these three models, the Richardson (2006) model is the most comprehensive one since it incorporates numerous firm-level control variables that are believed to be associated with investment efficiency. Moreover, this is also the most commonly used model, by previous research, such as Chen et al. (2016), Guariglia and Yang (2016) Ling et al. (2016), and Chen et al. (2017a).

As such, to measure firm investment efficiency, we use the following specification following Richardson's (2006) model:

$$I\_NEW_{it} = \beta_0 + \beta_1 MTB_{it-1} + \beta_2 LEV_{it-1} + \beta_3 CASHHOLD_{it-1} + \beta_4 AGE_{it-1} + \beta_5 Size_{it-1} + \beta_6 ROA_{it-1} + \beta_7 I\_NEW_{it-1} + \sum YEAR_i + \sum INDUSTRY_t + \varepsilon_{it} \quad (6.1)$$

where I_NEW is the firm's new investment expenditure, defined as the sum of capital expenditures, research and development expenditures, acquisitions minus sales of fixed assets and minus amortisation and depreciation expenses; MTB is the market-to-book ratio, the ratio of the book value of total assets minus the book value of equity plus the market value of the equity to book value of assets; LEV is the leverage ratio, total debt divided by total assets; CASHHOLD is the cash holding ratio, cash and cash equivalent divided by total assets; AGE is firm age; SIZE is firm size, natural logarithm of total assets; ROA is net income divided by total assets; where the subscript i indexes industries, there are 8 industry indicator variables (using Indonesian Stock Exchange groupings) in this regression; and t indexes years (t = 2010–2015).

The measurement of investment inefficiency follows a two-step procedure. The first step is to determine the level of over/under investment from expected (normal) levels of

investment using the residuals value from Equation 5.1. The over-investment inefficiency problem is marked by a positive residuals value (above zero) while the under-investment inefficiency problem is marked by a negative residuals value (below zero). The second step is to measure the general inefficiency level, whether it be over- or under-investment, using the absolute values of residuals from the regression from Equation 5.1 (Chen et al., 2017a; Ward et al., 2017).

6.4.2 Empirical model

To test the relationship between political connections and the level of investment inefficiency, we use the following specification:

$$INVEFF_{it} = \beta_0 + \beta_1 PC_{it} + \beta_2 TOP5\_OWN_{it} + \beta_3 PBOARD_{it} + \beta_4 WEDGE_{it} + \beta_5 CG_{it} + \beta_6 DPR_{it} + \beta_7 SIZE_{it} + \beta_8 AGE_{it} + \beta_9 FCFTA_{it} + \beta_{10} CASHHOLD_{it} + \beta_{11} TANG_{it} + \beta_{12} ASYM_{it} + \beta_{13} FINCONST_{it} + \sum YEAR_t + \sum INDUSTRY_i + \varepsilon_{it} \quad (6.2)$$

where INVEFF is one of the firm-level investment inefficiency measures used in this study. Overall investment inefficiency (INEFF) is the absolute value of residuals from the regression from Equation 6.1 discussed in the previous section. Over-investment (OVER) is the subsample of firms with the over-investment inefficiency problem, marked by the positive residuals value from Equation 6.1. Under-investment (UNDER) is the subsample of firms with the under-investment inefficiency problem, marked by the negative residuals value from Equation 6.1.

PC is an indicator variable coded 1 if the firm has political connections, and 0 otherwise. There are many ways to define political connections from the literature. Fisman (2001) and Johnson and Mitton (2003) define political connectedness as a situation when a business is owned by people with close connections to political power and the value of the firm is affected by these connections. Meanwhile, Faccio (2006) identify a firm as a politically connected firms if at least one of its large shareholders (shareholders with at least 10% of voting shares), or one of its board members is a current/former member of parliament, current/former ministers or having a close relationship to top politicians or political party.

This study follows Faccio (2006) definition to identify politically connected firms. Firms are categorised as politically connected (PC) if at least one large shareholder (controlling at least 10% of the votes directly or indirectly) or its board member (BOC/BOD) is a current/former Member of Parliament, a current/former minister, current/former high-ranking government officials, or having close relationship to top

politicians or political party. We expect a negative relationship between PC and investment inefficiency. Thus, politically connected firms are expected to have a lower level of investment inefficiency than non-connected firms.

This study includes several firm-specific characteristics control variables that are used in the prior investment efficiency literature. The first control variable is the dividend pay-out ratio. Dividend payments reduce the possibility of investment inefficiency by the management of the firms (Biddle et al., 2009; Cheng et al., 2013a; Liu et al., 2015a). The dividend pay-out ratio (DPR) is measured as the paid dividends (interim and final dividend) for the current financial year divided by net income for the same period.

We also include firm size as our second control variable. Previous studies suggest that larger firms are expected to have a lower level of investment inefficiency because larger firms have more capacity and capability to assess their investment projects (Chen et al., 2011c; Chen et al., 2017a). SIZE is defined as the natural logarithm of market capitalisation expressed in Indonesian Rupiahs.

According to Richardson (2006), firm age has an influence on firm investment efficiency. As firms get older and the industry matures, less investment opportunities arise, which could lead to a higher level of investment inefficiency. However, older firms are also usually larger firms with more capacity and capability to assess investment projects, which lead to a lower level of investment inefficiency (Chen et al., 2011c; Chen et al., 2017a). Firm age, *AGE*, is measured as the natural logarithm of firm age, the number of years since the firm's establishment.

The next control variable is the free cash flow ratio. Free cash flow is defined as cash flow beyond what is necessary to maintain assets in place and to finance expected new investments. Firms with positive free cash flow are more prone to have a higher level of investment inefficiency (Richardson, 2006; Guariglia and Yang, 2016). Free cash flow ratio, FCFTA, is measured as the sum of the cash flow from operation, amortisation and depreciation expenses minus research and development expenses divided by the sum of average total assets, less the expected (normal) investment projects from the model in Equation 6.1.

Firms with a higher level of cash-on-hand are related to a potentially higher level of investment inefficiency, in the form of over-investment, while firms with cash constraints are associated with under-investment inefficiency problems (Biddle et al., 2009; Chen et al., 2011b). The cash holding ratio, *CASHHOLD*, is measured as the ratio of cash and cash equivalent divided by total assets.

The asset tangibility ratio, TANG, defined as net fixed assets divided by total assets, is also included as a control variable. A higher asset tangibility ratio may be an indicator of a higher level of inefficient investment (Almeida and Campello, 2007; Biddle et al., 2009; Cheng et al., 2013a).

The next control variable is information asymmetry. Previous studies suggest that a higher level of information asymmetry is associated with a higher level of investment inefficiency (Richardson, 2006; Cheng et al., 2013a; Chen et al., 2016; Guariglia and Yang, 2016). Information asymmetry, ASYM, is measured as the percentage difference between the daily average bid and ask price and the daily closing share price for a one-year period (Amihud and Mendelson, 1989).

This study also includes financial constraints as the control variable, measured using the financial constraint index developed by Lamont et al. (2001), based on Kaplan and Zingales's (1997) model in the main regression (KZ index), and using Hadlock and Pierce's model (Hadlock and Pierce, 2010) financial constraint index (HP index) as a robustness check.

Firms without financial constraints have more capabilities and options to choose investment projects, thus making them more likely to face investment inefficiency problems than firms with financial constraints (Richardson, 2006; Cheng et al., 2013a; Guariglia and Yang, 2016). Financial constraints, FINCONST, is measured as the KZ index in the main regression model and the HP index in the robustness check.

Since previous research also mentions ownership structure as a possible influential factor for firm-level investment efficiency, we also include an ownership-related control variable in our regression. The ownership concentration, TOP5_OWN, is measured as the percentage of shareholding by the largest five shareholders, as was used in previous studies (Fan and Wong, 2002; Leuz et al., 2003; Firth et al., 2007). A higher level of ownership concentration is associated with a higher level of investment inefficiency (Chen et al., 2017a).

This study also includes several corporate governance variables. The measures are board participation (PBOARD), the difference between cash flow and control rights (WEDGE), and corporate governance quality (CG). The first governance variable is board participation, PBOARD, measured by the presence of board members with a familial affiliation to the controlling shareholders. A higher level of board independence, which is marked by the absence of board members with a familial relationship with the controlling shareholders, would lead to a more effective board (Dahya et al., 2008).

Moreover, a higher level of board independence is associated with a lower level of investment inefficiency (Liu et al., 2015b).

We use a dummy variable for the board independence control variable, PBOARD, with the value of 1 if the founder, current controlling shareholders and/or any of their family members serves as a board member (BOC and/or BOD) of the firm, and 0 otherwise.

The next corporate governance variable is the difference between cash flow rights and control rights (WEDGE). The use of a pyramidal structure allows the controlling shareholders to regain control of the firm with less amount of shareholding (Bebchuk et al., 2000; Morck, 2009). A previous study indicates that WEDGE is related to a higher level of investment inefficiency (Park et al., 2016).

The final governance variable is corporate governance quality (CG), which is measured using the corporate governance index modified from the 2017 Good Governance Report (Institute of Directors, 2017). Higher corporate governance quality is associated with a lower level of investment inefficiency (Chen et al., 2011b; Chen and Chen, 2012; Cheng et al., 2013a; Chen et al., 2016). The index consists of five governance segments, namely board effectiveness, audit and risk, remuneration and reward, shareholder relations, and stakeholder relations, which are further classified into 38 items that are available in our research. The full list and the justification for each metric are provided in Appendix 1. Finally, the subscript i indexes industries sectors and t indexes years (t = 2010–2015). All variables' definitions are included in Table 6.1.

Table 6-1. Variables definition

Variable	Description	Source
INEFF	Investment inefficiency measure is the absolute value of Richardson (2006) model residuals	Equation 3.2
OVER	Over-investment inefficiency measure. Samples with positive residuals value from Richardson model	Equation 3.2
UNDER	Under-investment inefficiency measure. Samples with negative residuals value from Richardson model	Equation 3.2
PC	Political connections. Dummy variable with the value of 1 if a firm has political connections, 0 otherwise	Annual Report
TOP5_OWN	Ownership concentration, Percentage of shareholding by five biggest shareholders	Annual Report & Capital IQ
WEDGE	The level of difference between cash flow and control rights	Annual Report

cont'd

Variable	Description	Source
PBOARD	Dummy variable for the presence of board members (BOC/BOD) which has a familial relationship with major/controlling shareholders	Compiled from Annual Report, Capital IQ, IPO Prospectus, and other reliable sources
CG	Corporate Governance Quality Index, continuous variable ranging from 0-1 based on the corporate governance quality index measures	Modified from Institute of Directors 2017 Corporate Governance Index (2017)
DPR	Dividend Pay-out Ratio, dividend divided by net income	Annual Report
SIZE	Firm size, natural logarithm of firm market capitalisation value at the end of the period	Bloomberg
AGE	Number of years since the legal foundation of the firm	Bloomberg
FCFTA	Free Cash Flow, (Cash flow from Operation + Amortization & Depreciation Expense - Research & Development Expense) / Average Total Assets – New Investment	Bloomberg
CASHHOLD	Cash holding ratio, cash & equivalent scaled by total assets	Bloomberg
TANG	Asset tangibility ratio, Net fixed assets (Net value of property, plant, and equipment after depreciation/nppe) scaled by total assets	Bloomberg
ASYM	Information asymmetry. Average Bid ask spread value over daily share price value based on daily trading activities for one-year period	Bloomberg
FINCONST	Financial Constraint Index	

Variable	Description
FINCONST	
KZIndex	Kaplan-Zingales (2001) Index = -1.001909*[(NIBE+DEPR)/LAGNPPE] +0.2826389*LAGMTB+3.139193*(TD/TA)- 39.3678*(DIVPAY/LAGNPPE) -1.314759*(CASH/LAGNPPE) where: NIBE= Net Income Before Extraordinary items DEPR=Depreciation Expenses LAGNPPE= Net Plant Property and Equipment from beginning of year period ($NPPE_{t-1}$) LAGMTB = Market-to-book ratio, (TA-TE+MVE)/(TA) book value of total assets minus the book value of equity plus the market value of equity divided by book value of total assets from beginning of year period (MTB_{t-1}) TD=Total Debt TA=Total Asset DIVPAY=Firms dividend payment to common shareholders CASH= Cash and cash equivalent

6.5 Empirical results

6.5.1 Univariate analysis

Table 6.2 reports the descriptive statistics for the main variables used in the empirical analysis. All continuous variables are winsorised at the 1% and 99% levels to

mitigate the effect of outliers. While the univariate statistics provide an initial indication that investment inefficiency in politically connected firms is lower than in non-connected firms, the difference is not statistically significant. However, there are significant differences between politically connected firms and non-connected firms in the over-investment and under-investment subsamples.

Table 6.2 also indicates that most of the controlling variables used in the main regression are significantly different across politically connected and non-connected firms, using either the two-sample t-test with an equal variance of the mean or the two-sample Wilcoxon rank-sum (Mann-Whitney) test.

The mean and median values of investment inefficiency in this research (0.036 & 0.024) are comparable with previous research, such as Ward et al. (2017), where the mean and median values of investment inefficiency are 0.090 and 0.060, respectively, and Chen et al. (2017a), where the mean and median values of over-investment are 0.075 and 0.041, respectively.

The mean and median values of residual investment (non-absolute value) in this research (0.000 and -0.007) are also comparable with previous research, such as Richardson (2006), where the mean and median values of residual investment are 0.000 and -0.012, respectively, and Guariglia and Yang (2016), where the mean and median values of over-investment are 0.000 and -0.006, respectively.

Regarding financial constraint measures, the mean and median values of the KZ index (-5.543 and -0.189) from this research are comparable with previous research, such as Guariglia and Yang (2016), where the mean and median values of the KZ Index are -4.719 & -0.945, respectively.

The Pearson correlations among the variables are reported in Table 6.3, and they seem to show that there is no significant correlation between political connections and the overall investment inefficiency measures. The test result for multicollinearity indicates there is no multicollinearity problem, with a mean VIF value of 1.36 and the highest score for an individual VIF is 1.72 for the firm size and financial constraint variables, and there is no single variable with a VIF value above 2.00.

Table 6-2. Descriptive statistics

Variable	Mean			Sig.	Median			Sig.	Standard Deviation			Observations		
	Full	PC	Non-PC	Dif	Full	PC	Non-PC	Dif	Full	PC	Non-PC	Full	PC	Non-PC
INEFF	0.0364	0.0356	0.0373		0.0242	0.0249	0.0230		0.0390	0.0349	0.0428	1561	794	767
OVER	0.0463	0.0415	0.0516	***	0.0290	0.0290	0.0291		0.0518	0.0591	0.0437	602	316	286
UNDER	-0.0302	-0.0316	-0.0288	*	-0.0226	-0.0235	-0.0213	*	0.0262	0.0268	0.0256	478	481	959
TOP 5	0.7211	0.7063	0.7363		0.7394	0.7259	0.7500	***	0.1731	0.1731	0.1719	1590	809	781
PBOARD	0.6686	0.5970	0.7426	***	1.0000	1.0000	1.0000	***	0.4709	0.4908	0.4375	1590	809	781
WEDGE	0.0769	0.0997	0.0533	***	0.0000	0.0000	0.0000	***	0.1595	0.1673	0.1473	1590	809	781
CG	0.4532	0.4897	0.4154	***	0.4155	0.4565	0.3838	***	0.1191	0.1289	0.0942	1590	809	781
DPR	0.1940	0.2286	0.1581	***	0.0000	0.0978	0.0000	***	0.3196	0.3535	0.2758	1590	809	781
SIZE	103.0000	153.0000	51.6789	***	150.1610	36.9796	5.4097	***	328.0000	418.0000	180.0000	1589	809	780
AGE	32.3189	34.0359	30.5403	***	30.0000	29.0000	31.0000		19.5994	23.5643	14.1818	1590	809	781
FCFTA	0.0175	0.0196	0.0153		0.0068	0.0056	0.0098		0.0963	0.0947	0.0979	1561	794	767
CASHHOLD	0.1074	0.1121	0.1025	***	0.0698	0.0794	0.0568	***	0.1101	0.1076	0.1125	1590	809	781
TANG	0.3727	0.3887	0.3562	***	0.3483	0.3615	0.3333	***	0.2253	0.2209	0.2286	1590	809	781
ASYM	0.3075	0.3185	0.2960		0.0485	0.0498	0.0463	*	0.7881	0.7955	0.7808	1590	809	781
FINCONST	-5.5429	-5.8068	-5.2683		-0.1885	-0.4452	-0.0576	***	15.6223	15.2372	16.0187	1557	794	763

Notes: *, **, and *** indicate a significant difference at the 10%, 5% and 1% levels, respectively. The significance of the differences is assessed based on two-tailed t-tests (mean) and Wilcoxon/Mann–Whitney tests (median).

Table 6-3. Correlation matrix

		1		2		3		4		5		6		7		8	
1	INEFF	1.0000															
2	PC	-0.0226		1.0000													
3	TOP5_OWN	-0.0049		-0.0865	***	1.0000											
4	PBOARD	-0.0528	**	-0.1546	***	-0.0200		1.0000									
5	WEDGE	0.0013		0.1453	***	0.1784	***	-0.2306	***	1.0000							
6	CG	-0.0486	*	0.3120	***	-0.0329		-0.3972	***	0.2139	***	1.0000					
7	DPR	-0.0048		0.1104	***	0.1354	***	-0.0847	***	0.1739	***	0.2255	***	1.0000			
8	SIZE	-0.0365	*	0.3946	***	-0.0882	***	-0.1723	***	0.2733	***	0.4926	***	0.3398	***	1.0000	
9	AGE	-0.1008	***	0.0326		0.1038	***	-0.1343	***	0.0152		0.2576	***	0.2368	***	0.0980	***
10	FCFTA	0.0086		0.0220		0.0960	***	-0.0454	*	0.1636	***	0.1279	***	0.2898	***	0.2267	***
11	CASHHOLD	-0.0213		0.0437	*	0.0553	**	-0.0114		0.0983	***	0.0912	***	0.2129	***	0.1624	***
12	TANG	0.2569	***	0.0723	***	-0.0002		-0.0452	*	-0.0104		0.0723	***	-0.0829	***	0.0898	***
13	ASYM	0.0330		0.0143		0.2170	***	-0.0319		0.1302	***	0.0243		0.1580	***	0.1226	***
14	FINCONST	0.0232		-0.0172		-0.1185	***	0.1175	***	-0.1136	***	-0.0822	***	-0.5202	***	-0.2128	***
		9		10		11		12		13		14					
9	AGE	1.0000															
10	FCFTA	0.1293	***	1.0000													
11	CASHHOLD	0.0913	***	0.3736	***	1.0000											
12	TANG	-0.0230		-0.0531	**	-0.3026	***	1.0000									
13	ASYM	0.1066	***	0.1153	***	0.1069	***	0.0020		1.0000							
14	FINCONST	-0.1329	***	-0.3628	***	-0.3325	***	0.3239	***	-0.1232	***	1.0000					

Notes: This table presents the Pearson correlation coefficients among the variables used in the main tests. *, **, and *** indicate significance of different at the 10%, 5% and 1% levels, respectively

6.5.2 Main regression results

Table 6.4 presents the results of the second-stage regression analysis of the relationship between political connections and firm over-investment level. The first stage of the estimation involves a probit regression of political connections (PCON) against the three instrument variables that are known to be related to political connectedness but do not directly relate to firm-level investment inefficiency measures, namely the percentage of connected firms in an industry, average board of commissioners' age and average board of commissioners' education level. The estimated probability of political connections, PC (i.e., the treatment effect measure), is generated in the first stage. The first-stage fitted value for political connections, PC-FIT, is then included in the second-stage regression, in which the dependent variables are the firm investment inefficiency level (Greene, 2007).

The regression uses industry and year dummies as well as firm clustering and robust standard error treatment. All variables are winsorised at the 1% and 99% levels, except for variables with a value between 0 and 1, to mitigate the effects of outliers on the regression results.

We use the original Kaplan-Zingales (KZ) index with a lagged market-to-book ratio, which was developed by Lamont et al. (2001), as the control variable in the main regression model, but the results are also similar when we use the Hadlock-Pierce (HP) index (Hadlock and Pierce, 2010) or when we calculate the KZ index using current, instead of the lagged market-to-book ratio. Results from the HP index are included in the robustness test section.

The results show a statistically significant negative relationship between all measures of investment inefficiency and political connections (PC-FIT), supporting the argument that the existence of politically connected board members is associated with the reduction of investment inefficiency. Political connections have a negative and statistically significant relationship, at the 1% level, with INEFF, the measures of the overall magnitude of investment inefficiency, as well as a negative and statistically significant relationship with OVER, the measures of investment inefficiency in firms with an over-investment problem, at the 10% level, and a negative and statistically significant relationship with UNDER, the measures of investment inefficiency in firms with an under-investment problem, at the 1% level.

Table 6-4. Second Stage Regression on the relationship between political connections and investment inefficiency using Heckman treatment effect

	INEFF	OVER	UNDER
	1	2	3
PC-FIT	-0.0140***	-0.0167*	-0.0139***
	(0.0052)	(0.0101)	(0.0052)
TOP 5	-0.0083	-0.0062	-0.0001
	(0.0072)	(0.0136)	(0.0064)
PBOARD	-0.0049*	-0.0025	-0.0048*
	(0.0025)	(0.0052)	(0.0025)
WEDGE	0.0010	-0.0106	0.0089
	(0.0072)	(0.0128)	(0.0070)
CG	-0.0044	0.0018	-0.0066
	(0.0124)	(0.0217)	(0.0119)
DPR	0.0014	-0.0021	0.0030
	(0.0041)	(0.0080)	(0.0037)
SIZE	-0.0018**	-0.0023*	-0.0016**
	(0.0007)	(0.0013)	(0.0007)
AGE	-0.0052**	-0.0069	-0.0015
	(0.0027)	(0.0045)	(0.0022)
FCFTA	-0.0035	0.0352	-0.0537***
	(0.0142)	(0.0270)	(0.0117)
CASHHOLD	0.0280**	-0.0237	0.0460***
	(0.0135)	(0.0246)	(0.0133)
TANG	0.0547***	0.0819***	0.0255***
	(0.0059)	(0.0104)	(0.0045)
ASYM	0.0027*	0.0038	0.0020
	(0.0015)	(0.0031)	(0.0014)
FINCONST	-0.0002*	-0.0006***	0.0000
	(0.0001)	(0.0002)	(0.0001)
Cons	0.0706***	0.0735**	0.0589***
	(0.0155)	(0.0305)	(0.0140)
Industry	Included	Included	Included
Year	Included	Included	Included
1st stage regression			
PCTPC_IND	2.4705***	1.6948**	2.8233***
	(0.6488)	(0.8114)	(0.6786)
BOC AGE	0.0471***	0.0551***	0.0403***
	(0.0115)	(0.0146)	(0.0125)
BOC EDU	0.9304***	1.0155***	0.9253***
	(0.1737)	(0.2348)	(0.1782)
_cons	-6.1564***	-6.4183***	-5.9415***
	(0.9091)	(1.2303)	(0.9801)
Fisher's z (LR)	0.2428***	0.1382	0.4854***
	(0.0874)	(0.1227)	(0.1414)
Ln Std. Dev	-3.2988***	-3.0608***	-3.6787***
	(0.0431)	(0.0454)	(0.0558)
Number of obs	1,552	599	953
Wald chi2(25)	188.13***	125.46***	147.46***
Wald test of indep. eqns.	7.71***	1.27	11.78***

Notes: Heckman treatment effect regression using maximum likelihood *t*-statistics calculated based on the robust standard errors clustered at firm-level. INEFF is the measure of overall investment inefficiency level, OVER is the measure of over-investment level for firms with over-investment problem only and UNDER is the measure of under-investment level for firms with under-investment problem only. PC-FIT is the fitted value of PC variable from the first stage regression with three instrumental variables (PCTPC_IND, BOCAGE and BOCEDUC). Columns 1,2&3 report regression coefficients and robust standard errors in parentheses.*, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively (two-tailed). Variables definitions are reported in Table 6.1.

These results support the stewardship theory of behaviour and indicate that politicians can act responsibly and with integrity when the system requires them to be held accountable (democratic government system, freedom of the press, transparency/disclosure requirement from politicians and the existence of a checks and balance system that provides punishment for wrong actions by politicians), even in a developing country that still has problems of a weak investor protection system and strong power by large/controlling shareholders, like Indonesia.

Besides political connectedness, there are two other control variables that have a significant relationship with all measures of investment inefficiency: firm size (SIZE) and the asset tangibility ratio (TANG). Firm size has a negative and statistically significant relationship with INEFF (at the 5% level), OVER (at the 10% level) and UNDER (at the 5% level). The results regarding firm size are consistent with previous studies' suggestion that larger firms have a lower level of investment inefficiency (Chen et al., 2011c; Chen et al., 2017a).

The asset tangibility ratio has a positive and significant relationship with INEFF, OVER and UNDER (all at the 1% level). The results regarding the asset tangibility ratio are consistent with previous research results which find that a higher asset tangibility ratio is associated with a higher level of investment inefficiency (Almeida and Campello, 2007; Biddle et al., 2009; Cheng et al., 2013a).

There is one control variable that has a significant relationship with overall investment inefficiency and over-investment inefficiency: financial constraints (FINCONST). Financial constraints have a negative and statistically significant relationship with INEFF (at the 10% level), and a negative and statistically significant relationship with UNDER (at the 1% level). These results are consistent with previous studies' suggestion that unconstrained firms are more likely to face investment inefficiency problems than firms with financial constraints (Richardson, 2006; Cheng et al., 2013a; Guariglia and Yang, 2016).

There are also two control variables that have a significant relationship with overall investment inefficiency and under-investment inefficiency: board independence (PBOARD) and the cash holding ratio (CASHHOLD). Board independence has a negative and statistically significant relationship with INEFF (at the 10% level) and a negative and statistically significant relationship with UNDER (at the 10% level). These results contradict previous studies' suggestion that a higher level of board independence is associated with a lower level of investment inefficiency (Liu et al., 2015b). Instead, the results regarding the relationship between the existence of the owner and/or their family

members as board members of the firms and a lower level of overall investment inefficiency as well as a lower level of under-investment inefficiency seem to support the view that controlling shareholders can act responsibly and protect the interests of the firm instead of expropriating it (Dahya et al., 2008; Bona-Sanchez et al., 2014).

The cash holding ratio has a positive and statistically significant relationship with INEFF (at the 5% level) and a positive and statistically significant relationship with UNDER (at the 1% level). These results are consistent with previous research results which find that firms with a higher level of cash-on-hand are related to potentially higher levels of investment inefficiency (Biddle et al., 2009; Chen et al., 2011b).

The results regarding firm age (AGE), free cash flow ratio (FCFTA) and information asymmetry (ASYM) are also consistent with previous studies' suggestions. Older firms are more capable of assessing their investment projects, leading to a lower level of investment inefficiency (Chen et al., 2011c; Chen et al., 2017a). A higher level of available free cash flow reduces the problem of under-investment inefficiency (Guariglia and Yang, 2016) and a higher level of information asymmetry leads to a higher level of investment inefficiency (Richardson, 2006; Cheng et al., 2013a; Chen et al., 2016; Guariglia and Yang, 2016).

The results from Table 6.4 support our first hypothesis regarding the negative relationship between political connections and overall investment inefficiency measure. Moreover, the results also support our second hypothesis that political connections reduce both types of investment inefficiency : under-investment and over-investment among listed firms in Indonesia.

6.5.3 Corporate governance quality subsamples regression results

The third hypothesis of this study concerns the complementary relationship between political connections and corporate governance quality with investment inefficiency. To test this hypothesis, we divide the samples into two categories of subsamples, namely high corporate governance quality and low corporate governance quality. The sample is divided based on the median value of the corporate governance quality control variable, CG.

If political connectedness and corporate governance quality have a substitutionary relationship, the effect of political connections should be similar between the two subsamples. However, if political connectedness and corporate governance quality have a complementary relationship, the effect of political connections in reducing investment inefficiency should be stronger in the firms with a higher level of corporate governance

quality subsample than in the firms with a lower level of corporate governance quality subsample.

The results in Table 6.5 show a negative and significant relationship between political connections and all measures of investment inefficiency for firms with a higher level of corporate governance quality. Political connectedness is associated with the reduction of overall investment inefficiency/INEFF (significant at the 1% level), as well as the reduction of over-investment inefficiency/OVER (significant at the 10% level) and the reduction of under-investment inefficiencies/UNDER (significant at the 1% level) for firms with a higher level of corporate governance quality.

Meanwhile, although the signs are similar for firms with high corporate governance quality, there are no significant relationships between all measures of investment inefficiency with the political connections variable in the subsample of firms with a lower level of corporate governance quality. These results seem to support the assumption that political connections and corporate governance quality have a complementary relationship regarding investment inefficiency in Indonesia's listed firms.

The results from the corporate governance subsamples regression support our third hypothesis that the negative relationship between political connectedness and investment inefficiency is more pronounced in firms with better corporate governance quality. These results are also consistent with the results from the previous two chapters and provide more evidence on the complementary relationship between political connections and corporate governance quality among Indonesian listed firms.

These results also support the assumption that politicians act responsibly and can act as a means of improving corporate governance quality for firms (Bona-Sanchez et al., 2014). Firms appoint former politicians to provide knowledge of the policy process and procurement and government planning and to bring their political network and technical expertise to the boardroom, as well as for their knowledge of the inner workings of politics and government (González-Bailon et al., 2013; Pascual-Fuster and Crespí-Cladera, 2018).

Moreover, the appointment of former politicians instead of current politicians also seems to remove the need for firms to engage in unproductive investment activities as a payback to the politicians for the benefits they received from the connections (Chen et al., 2011c; Ling et al., 2016; Chen et al., 2017a; Hou et al., 2017; Saeed et al., 2017).

Table 6-5. Regressions results for the joint effect of political connections and corporate governance quality on investment inefficiency

	HIGH-CG			LOW-CG		
	INEFF	OVER	UNDER	INEFF	OVER	UNDER
	1	2	3	4	5	6
PC-FIT	-0.0163***	-0.0180*	-0.0229***	-0.0079	-0.0106	-0.0073
	(0.0061)	(0.0100)	(0.0082)	(0.0116)	(0.0349)	(0.0093)
TOP 5	-0.0079	0.0088	-0.0106	-0.0079	-0.0214	0.0056
	(0.0098)	(0.0180)	(0.0087)	(0.0090)	(0.0211)	(0.0085)
PBOARD	-0.0054	-0.0040	-0.0039	-0.0042	0.0029	-0.0049
	(0.0034)	(0.0064)	(0.0028)	(0.0035)	(0.0078)	(0.0033)
WEDGE	-0.0040	-0.0299*	0.0139*	0.0112	0.0427*	0.0095
	(0.0088)	(0.0165)	(0.0075)	(0.0104)	(0.0238)	(0.0105)
DPR	0.0015	0.0011	-0.0009	0.0046	-0.0049	0.0069
	(0.0038)	(0.0076)	(0.0028)	(0.0081)	(0.0174)	(0.0073)
SIZE	-0.0017**	-0.0010	-0.0026***	-0.0018	-0.0020	-0.0011
	(0.0009)	(0.0017)	(0.0007)	(0.0009)	(0.0017)	(0.0010)
AGE	-0.0059**	-0.0097*	0.0008	-0.0054	-0.0084	-0.0030
	(0.0030)	(0.0055)	(0.0025)	(0.0045)	(0.0091)	(0.0036)
FCFTA	-0.0078	0.0340	-0.0641***	0.0046	0.0454	-0.0461***
	(0.0195)	(0.0351)	(0.0165)	(0.0193)	(0.0397)	(0.0154)
CASHHOLD	0.0217	-0.0725**	0.0723***	0.0280*	0.0265	0.0392**
	(0.0178)	(0.0304)	(0.0160)	(0.0156)	(0.0317)	(0.0157)
TANG	0.0518***	0.0643***	0.0358***	0.0553***	0.0956***	0.0197***
	(0.0087)	(0.0151)	(0.0067)	(0.0085)	(0.0160)	(0.0057)
ASYM	0.0026	-0.0013	0.0052***	0.0025	0.0121*	-0.0012
	(0.0023)	(0.0036)	(0.0018)	(0.0025)	(0.0062)	(0.0014)
FINCONST	0.0000	-0.0004***	0.0000	-0.0002	-0.0007*	0.0000
	(0.0001)	(0.0002)	(0.0001)	(0.0002)	(0.0004)	(0.0001)
Cons	0.0789***	0.0842**	0.0605***	0.0631***	0.0517	0.0536***
	(0.0214)	(0.0374)	(0.0167)	(0.0202)	(0.0418)	(0.0209)
Industry	Included	Included	Included	Included	Included	Included
Year	Included	Included	Included	Included	Included	Included
1st stage regression						
PCTPC_IND	1.6523**	1.4219	1.795**	3.1774***	1.7993	3.7061***
	(0.8084)	(1.0110)	(0.8347)	(0.8341)	(1.1526)	(0.8594)
BOC AGE	0.0520***	0.0548**	0.0505***	0.0418***	0.0513***	0.034**
	(0.0166)	(0.0216)	(0.0157)	(0.0145)	(0.0195)	(0.0171)
BOC EDU	0.9976***	1.122***	0.8487***	0.6854***	0.6606**	0.7988***
	(0.2170)	(0.3112)	(0.2498)	(0.2191)	(0.3026)	(0.2262)
Cons	-5.9765***	-6.2785***	-5.6463***	-5.8613***	-5.7259***	-5.9118***
	(1.2093)	(1.6747)	(1.2739)	(1.1380)	(1.5870)	(1.1836)
Fisher's z (LR)	0.2539**	0.1113	0.7335***	0.1341	0.0501	0.3268
	(0.1120)	(0.1348)	(0.2479)	(0.1712)	(0.4069)	(0.2260)
Ln Std. Dev	-3.3666***	-3.199***	-3.6437***	-3.2643***	-2.9737***	-3.7274***
	(0.0564)	(0.0647)	(0.0960)	(0.0581)	(0.0566)	(0.0743)
Number of obs.	786	337	449	766	262	504
Wald chi2(24)	105.16***	83.64***	138.8***	116.46***	188.66***	76.91***
Wald test of indep. eqns.	5.37**	0.71	8.50***	0.99	0.15	2.10

Notes: Subsamples regressions, dividing the samples into two subsamples with a similar number of samples, based on the median value of CG, the corporate governance quality control variable. Columns 1-3 report regression coefficients and robust standard errors in parentheses for firms with a disclosure index score above the median value (HIGH-CG). Columns 4-6 report regression coefficients and robust standard errors in parentheses for firms with a disclosure index score below the median value (LOW-CG). INEFF is the measure of overall level of investment inefficiency, OVER is the measure of investment inefficiency only in firms with over-investment and UNDER is the measure of investment inefficiency only in firms with under-investment. PC-FIT is the fitted value of PC variable from the first stage regression with three instrumental variables (PCTPC_IND, BOCAGE and BOCEDUC). *, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively (two-tailed). Variables definitions are reported in Table 6.1.

6.5.4 Financial constraints subsamples regression results

The fourth hypothesis of this study concerns the joint effect of political connections and financial constraints on investment inefficiency. To test this hypothesis, we divide the samples into two categories of subsamples, namely firms with and without financial constraints. The sample is divided based on the median value of the KZ index, the financial constraints control variable.

The results in Table 6.6 show a negative and significant relationship between political connections and all measures of investment inefficiency for the firms without financial constraints subsamples. Political connections are associated with the reduction of overall investment inefficiency, over-investment, and under-investment only for financially unconstrained firms. These results support our fourth hypothesis that the negative relationship between political connectedness and firms' investment inefficiency is more pronounced in firms without financial constraints.

There is a negative and statistically significant relationship between political connectedness and overall investment inefficiency/INEFF (significant at the 1% level), a negative and statistically significant relationship between political connectedness and over-investment inefficiency/OVER (significant at the 10% level), as well as a negative and statistically significant relationship between political connectedness and under-investment inefficiency/UNDER (significant at the 1% level) for firms with financial constraints.

Meanwhile, although the signs are similar to firms without financial constraints, there are no significant relationships between all measures of investment inefficiency with the political connections variable in the subsample of firms with financial constraints. These results are consistent with the expectation of our second hypothesis and further strengthen the argument that the appointment of former instead of current politicians seems to remove the need for firms to engage in unproductive investment activities as a payback to the politicians for the benefits they receive from the connections (González-Bailon et al., 2013; Pascual-Fuster and Crespí-Cladera, 2018).

Table 6-6. Regressions results for the joint effect of political connections and financial constraints on investment inefficiency

	CONSTRAINED			UNCONSTRAINED		
	INEFF	OVER	UNDER	INEFF	OVER	UNDER
	1	2	3	4	5	6
PC-FIT	-0.0103	-0.0271	-0.0083	-0.0214***	-0.0244*	-0.0181***
	(0.0081)	(0.0166)	(0.0157)	(0.0069)	(0.0126)	(0.0065)
TOP 5	-0.003	0.0088	0.0018	-0.0170	-0.0295	0.0031
	(0.0090)	(0.0186)	(0.0071)	(0.0109)	(0.0205)	(0.0112)
PBOARD	-0.0046	-0.0065	0.0003	-0.0074**	-0.0007	-0.0108***
	(0.0032)	(0.0072)	(0.0030)	(0.0036)	(0.0068)	(0.0037)
WEDGE	0.004	0.0236	0.0033	-0.0028	-0.0110	0.0077
	(0.0107)	(0.0251)	(0.0102)	(0.0098)	(0.0159)	(0.0093)
CG	0.0047	0.0183	0.0006	-0.011	0.0083	-0.0123
	(0.0178)	(0.0349)	(0.0157)	(0.0161)	(0.0276)	(0.0160)
DPR	0.0053	0.023	-0.0013	0.0008	0.0013	0.0016
	(0.0107)	(0.0242)	(0.0051)	(0.0040)	(0.0090)	(0.0039)
SIZE	-0.0022**	-0.0022	-0.0022**	-0.0022**	-0.0040**	-0.0013
	(0.0010)	(0.0019)	(0.0009)	(0.0010)	(0.0017)	(0.0011)
AGE	-0.0062*	-0.0065	-0.002	-0.0062	-0.0068	-0.0038
	(0.0034)	(0.0063)	(0.0024)	(0.0038)	(0.0065)	(0.0035)
FCFTA	-0.0349	0.0038	-0.1009***	0.0177	0.0886***	-0.0321**
	(0.0223)	(0.0411)	(0.0209)	(0.0175)	(0.0328)	(0.0131)
CASHHOLD	-0.0056	-0.0896	0.0275	0.0273**	-0.0217	0.0493***
	(0.0315)	(0.0593)	(0.0311)	(0.0138)	(0.0227)	(0.0134)
TANG	0.0408***	0.0689***	0.0180***	0.0737***	0.0931***	0.0416***
	(0.0063)	(0.0150)	(0.0051)	(0.0098)	(0.0157)	(0.0093)
ASYM	0.0055	0.0091*	0.0013	0.0011	-0.0034	0.0019
	(0.0034)	(0.0048)	(0.0026)	(0.0018)	(0.0055)	(0.0016)
Cons	0.0753***	0.0683	0.0613***	0.0901***	0.1070***	0.0665***
	(0.0202)	(0.0474)	(0.0157)	(0.0256)	(0.0413)	(0.0253)
Industry	Included	Included	Included	Included	Included	Included
Year	Included	Included	Included	Included	Included	Included
1st stage regression						
PCTPC_IND	2.3858***	0.9974	2.9976***	2.5880***	2.3313**	2.7006***
	(0.8430)	(1.0361)	(0.9271)	(0.7980)	(1.0289)	(0.8479)
BOC AGE	0.0571***	0.0664**	0.0519***	0.0377***	0.0417**	0.0316*
	(0.0144)	(0.0183)	(0.0184)	(0.0147)	(0.0195)	(0.0167)
BOC EDU	0.9500***	1.0305***	0.9377***	0.9619***	1.0383***	0.9751***
	(0.2286)	(0.3120)	(0.2547)	(0.2115)	(0.2932)	(0.2336)
Cons	-6.7083***	-6.7744***	-6.6714***	-5.7812***	-6.0118***	-5.5451***
	(1.1656)	(1.4809)	(1.4823)	(1.1520)	(1.6944)	(1.3036)
Fisher's z (LR)	0.1320	0.1460	0.3942	0.4620***	0.3566*	0.6004***
	(0.1250)	(0.1915)	(0.4322)	(0.1381)	(0.1928)	(0.1756)
Ln Std. Dev	-3.2483***	-2.988***	-3.6877***	-3.3602***	-3.1585***	-3.7063***
	(0.0527)	(0.0565)	(0.0982)	(0.0656)	(0.0691)	(0.0829)
Number of obs.	777	296	481	775	303	472
Wald chi2(24)	134.25***	87.21***	83.58***	133.71***	97.19***	121.22***
Wald test of indep. eqns.	1.12	0.58	0.83	11.19***	3.42*	11.69***

Notes: Subsamples regressions using maximum likelihood with firm clustering and robust standard error, dividing the samples into two subsamples with similar number of samples, based on the median value the financial constraints control variable, KZ index. Columns 1-3 report regression coefficients and robust standard errors in parentheses for firms with financial constraints. Columns 4-6 report regression coefficients and robust standard errors in parentheses for firms without financial constraints. INEFF is the measure of overall investment inefficiency level, OVER is the measure of over-investment level for firms with over-investment problem only and UNDER is the measure of under-investment level for firms with under-investment problem only. PC-FIT is the fitted value of PC variable from the first stage regression with three instrumental variables (PCTPC_IND, BOCAGE and BOCEDUC). *, **, and *** indicate significance of different at the 10%, 5% and 1% levels, respectively. Variables definitions are reported in Table 6.1.

Moreover, the results from Table 6.6 regarding the participation of firms' controlling shareholders and/or their families as board members also seem to support the argument of the responsible controlling shareholders view from the main regression results in Table 6.4, especially for firms without financial constraints. The existence of board members who have a familial relationship with controlling shareholders helps unconstrained firms to have a lower level of under-investment and overall investment inefficiency. PBOARD has a negative and statistically significant relationship with the overall investment inefficiency measure, INEFF (significant at the 5% level), and the under-investment inefficiency measure, UNDER (significant at the 1% level). These results suggest that the controlling ownership of listed firms in Indonesia that puts their family members to serve as board members of the firm does so to protect their interest and to actively manage firm investment strategy.

The results regarding the relationship between free cash flow and the under-investment inefficiency problem are also consistent with the main regression results from Table 6.4 and corporate governance quality subsamples from Table 6.5. However, the results from financially unconstrained firms also suggest that a higher level of free cash flow could also lead to a higher level of over-investment inefficiency, consistent with previous studies' suggestion (Cleary, 2006; Richardson, 2006; Chen et al., 2016; Guariglia and Yang, 2016).

There are several implications related to the results regarding political connections, board participation and the free cash flow ratio for financially unconstrained firms. First, financially unconstrained firms, which are usually also related to a higher level of free cash flow, may face an agency conflict between managers and shareholders since managers of the firms can use the free cash flow for investment projects that may benefit the managers but not necessarily be beneficial for the shareholders (Richardson, 2006). Second, shareholders can use good corporate governance mechanisms to reduce the tendency for managers of financially unconstrained firms to engage in inefficient over-investment activities (Wen, 2010). As such, the results from Table 6.6 indicate that while a higher level of free cash flow may lead to a higher level of agency costs of managerial over-investment activities for financially unconstrained firms, political connectedness can act as a corporate governance tool to reduce this problem.

6.5.5 Information asymmetry subsamples regression results

The fifth hypothesis of this study concerns the joint effect of political connections and information asymmetry on investment inefficiency. To test this hypothesis, we divide the samples into two categories of subsamples, namely firms with a high level of information asymmetry and firms with a low level of information asymmetry. The sample is divided based on the median value of ASYM, the information asymmetry control variable.

The results in Table 6.7 show a negative and significant relationship between political connections and all measures of investment inefficiency for firms with a higher level of information asymmetry. Political connectedness is associated with a reduction of overall investment inefficiency/INEFF (significant at the 1% level) as well as a reduction of over-investment inefficiency/OVER (significant at the 1% level) and a reduction of under-investment inefficiencies/UNDER (significant at the 5% level) for firms with a higher level of information asymmetry. These results support our fifth hypothesis that the negative relationship between political connectedness and firms' investment inefficiency is more pronounced in firms with higher level of information asymmetry.

Meanwhile, although the signs are similar to firms with higher level of information asymmetry, there are no significant relationships between all measures of investment inefficiency with the political connections variable in the subsample of firms with a lower level of information asymmetry. These results seem to further support the assumption from Table 6.6 regarding the financial constraints subsample, namely that political connections can act as a corporate governance tool and play a role in lessening the effect of a higher level of information asymmetry, which is also an indication of the greater agency problem, on investment inefficiency.

Moreover, the results regarding board participation are also consistent with the effect of board participation on financially unconstrained firms in Table 6.6. The presence of the founder and/or family members of the controlling shareholders is associated with a reduction of the overall measures of investment inefficiency, INEFF, and the reduction of the under-investment inefficiency, with both results significant at the 5% level. These results also suggest responsible behaviours from controlling shareholders with regard to firms' investment strategies.

Table 6-7. Regression results for the joint effect of political connections and information asymmetry on investment inefficiency

	HIGH ASYMMETRY			LOW ASYMMETRY		
	INEFF	OVER	UNDER	INEFF	OVER	UNDER
	1	2	3	4	5	6
PC-FIT	-0.0207***	-0.0293***	-0.0179**	-0.0039	-0.0022	-0.0068
	(0.0058)	(0.0104)	(0.0065)	(0.0108)	(0.0189)	(0.0095)
TOP 5	-0.0147	-0.0424*	0.0045	0.003	0.0213	0.0027
	(0.0102)	(0.0240)	(0.0078)	(0.0100)	(0.0190)	(0.0091)
PBOARD	-0.0080**	-0.0111	-0.0064**	-0.0022	0.0020	-0.0031
	(0.0032)	(0.0073)	(0.0030)	(0.0038)	(0.0080)	(0.0031)
WEDGE	0.0023	-0.002	0.0086	-0.0060	-0.0132	0.001
	(0.0080)	(0.0151)	(0.0067)	(0.0125)	(0.0221)	(0.0125)
CG	-0.0065	-0.0170	0.0055	-0.0055	0.0109	-0.0087
	(0.0175)	(0.0290)	(0.0162)	(0.0191)	(0.0335)	(0.0159)
DPR	0.0011	-0.0020	0.0003	0.0039	0.0103	0.0075
	(0.0038)	(0.0074)	(0.0027)	(0.0081)	(0.0178)	(0.0068)
SIZE	-0.0011	-0.0024	-0.0004	-0.0018	-0.0015	-0.0023**
	(0.0009)	(0.0016)	(0.0009)	(0.0011)	(0.0021)	(0.0011)
AGE	-0.0042	0.0036	-0.004	-0.0078*	-0.017**	-0.0024
	(0.0030)	(0.0055)	(0.0029)	(0.0043)	(0.0077)	(0.0030)
FCFTA	0.0159	0.0348	-0.0345**	-0.0249	0.0303	-0.0686***
	(0.0185)	(0.0364)	(0.0148)	(0.0216)	(0.0439)	(0.0166)
CASHHOLD	0.0306**	-0.0217	0.0510***	0.0284	-0.0528	0.0473**
	(0.0127)	(0.0262)	(0.0133)	(0.0246)	(0.0441)	(0.0214)
TANG	0.0582***	0.0772***	0.0302***	0.0502***	0.0782***	0.0215***
	(0.0074)	(0.0158)	(0.0066)	(0.0087)	(0.0153)	(0.0055)
FINCONST	-0.0001	-0.0005*	0.0000	-0.0003	-0.0007***	0.0000
	(0.0001)	(0.0003)	(0.0001)	(0.0002)	(0.0002)	(0.0001)
Cons	0.0684***	0.1001**	0.0456***	0.0681**	0.0707	0.0675***
	(0.0174)	(0.0404)	(0.0175)	(0.0243)	(0.0531)	(0.0203)
Industry	Included	Included	Included	Included	Included	Included
Year	Included	Included	Included	Included	Included	Included
1st stage regression						
PCTPC_IND	2.3238***	2.3081**	2.3651***	2.6869***	1.3743	3.3006***
	(0.8612)	(1.1443)	(0.9190)	(0.7985)	(0.9861)	(0.8482)
BOC AGE	0.0441***	0.0429**	0.0438***	0.0497***	0.0664***	0.0371**
	(0.0142)	(0.0184)	(0.0157)	(0.0144)	(0.0195)	(0.0167)
BOC EDU	1.1238***	1.0427***	1.1849***	0.7638***	1***	0.6959***
	(0.2127)	(0.2571)	(0.2648)	(0.2270)	(0.3478)	(0.2148)
Cons	-6.3209***	-5.9853***	-6.5101***	-6.0718***	-6.9549***	-5.4896***
	(1.0894)	(1.3976)	(1.2732)	(1.1642)	(1.7233)	(1.2092)
Fisher's z (LR)	0.3783***	0.3405**	0.5832***	0.0715	-0.0245	0.3341*
	(0.1132)	(0.1411)	(0.1983)	(0.1758)	(0.2307)	(0.2290)
Ln Std. Dev	-3.3313***	-3.081***	-3.7179***	-3.2761***	-3.0562***	-3.6787***
	(0.0575)	(0.0602)	(0.0811)	(0.0578)	(0.0619)	(0.0709)
Number of obs.	777	290	487	775	309	466
Wald chi2(24)	163.17***	101.05***	104.51***	118.63***	88.29***	126.94***
Wald test of indep. eqns.	10.53***	5.93**	7.05***	0.17	0.01	2.13

Notes: Subsamples regressions using maximum likelihood with firm clustering and robust standard error, dividing the samples into two subsamples with similar number of samples, based on the median value of ASYM, the information asymmetry control variable. Columns 1-3 report regression coefficients and robust standard errors in parentheses for firms with information asymmetry value above the median value (HIGH-ASYM). Columns 4-6 report regression coefficients and robust standard errors in parentheses for firms with information asymmetry value below the median value (LOW-ASYM). INEFF is the measure of overall investment inefficiency level, OVER is the measure of over-investment level for firms with over-investment problem only and UNDER is the measure of under-investment level for firms with under-investment problem only. PC-FIT is the fitted value of PC variable from the first stage regression with three instrumental variables (PCTPC_IND, BOCAGE and BOCEDUC). *, **, and *** indicate significance of different at the 10%, 5% and 1% levels, respectively. Variables definitions are reported in Table 6.1.

6.6 Robustness Check

6.6.1 Alternative models to measures investment inefficiency: Industry median & Biddle's Model

To test the robustness of our main regression results, we use two other measures of investment inefficiency. The first alternative measure follows Guariglia and Yang (2016), using the values of firms' abnormal investment from Richardson's (2006) model and ranking them based on the magnitude of abnormal investment level within each industry and year. Firms are classified as under-investing (over-investing) firms when their abnormal investment lies below (above) the median of the distribution.

The second alternative measure follows Biddle et al. (2009), measuring investment in a given firm-year as the sum of capital expenditures, R&D expenditures, and acquisitions minus sales of PPE, scaled by lagged total assets. From that, the estimation is proceeded by first estimating a firm-specific model of investment as a function of growth opportunities (as measured by sales growth) and using the residuals as a firm-specific proxy for deviations from expected investment.

The results for these alternatives models are shown in Table 6.8. Overall, the results regarding overall investment inefficiency confirm our main hypothesis regarding the role of political connections in reducing firm-level overall investment inefficiency. Political connectedness has a negative and statistically significant relationship with the overall investment inefficiency measures for both the median industry model (significant at the 1% level) and Biddle's model (significant at the 10% level). However, there are slightly different results regarding over-investment and under-investment inefficiency between the two alternative models.

Political connectedness only has a negative and statistically significant relationship with the under-investment inefficiency measure for the median industry model (significant at the 1% level) and a negative and statistically significant relationship with the over-investment inefficiency measure for the Biddle model (significant at the 5% level). There is no statistically significant relationship between political connectedness and the over-investment inefficiency measure for the median industry model and between political connectedness and the under-investment inefficiency measure for the Biddle model.

Table 6-8.Treatment effect regression using alternative investment inefficiency measures

	MEDIAN INDUSTRY			BIDDLE		
	INEFF	OVER	UNDER	INEFF	OVER	UNDER
	1	2	3	4	5	6
PC-FIT	-0.0168***	-0.0109	-0.0224***	-0.0253*	-0.0581**	-0.0044
	(0.0060)	(0.0091)	(0.0054)	(0.0133)	(0.0285)	(0.0180)
TOP5_OWN	-0.0096	-0.0084	-0.0026	-0.0281	-0.0446*	0.0031
	(0.0081)	(0.0118)	(0.0073)	(0.0183)	(0.0234)	(0.0282)
PBOARD	-0.0045	-0.0044	-0.0043	-0.0127	-0.0166*	-0.0011**
	(0.0029)	(0.0044)	(0.0027)	(0.0079)	(0.0095)	(0.0120)
WEDGE	-0.0033	-0.0168	0.0093	-0.004	-0.0313	0.0236
	(0.0081)	(0.0130)	(0.0069)	(0.0167)	(0.0193)	(0.0276)
CG	0.0039	-0.0032	0.0002	0.0005	0.0203	-0.0951
	(0.0139)	(0.0202)	(0.0141)	(0.0303)	(0.0363)	(0.0530)
DPR	0.0024	0.0005	0.0038	-0.0059	0.0338***	-0.0485
	(0.0043)	(0.0067)	(0.0043)	(0.0147)	(0.0130)	(0.0254)
SIZE	-0.0012	-0.0007	-0.0017**	0.0011	0.0054***	-0.0072
	(0.0008)	(0.0011)	(0.0008)	(0.0019)	(0.0018)	(0.0033)
AGE	-0.0046	-0.0098**	0.0013	-0.0035	-0.008	0.0132
	(0.0029)	(0.0044)	(0.0025)	(0.0066)	(0.0072)	(0.0090)
FCFTA	0.0122	0.0416*	-0.0518***	0.0317	0.0577*	-0.1152
	(0.0160)	(0.0244)	(0.0128)	(0.0308)	(0.0328)	(0.0552)
CASHHOLD	0.0364**	-0.0011	0.0538***	0.0109	0.0904**	-0.1191
	(0.0150)	(0.0210)	(0.0159)	(0.0333)	(0.0401)	(0.0602)
TANG	0.0618***	0.0842***	0.0277***	0.0086	0.0588***	-0.0609***
	(0.0067)	(0.0101)	(0.0050)	(0.0157)	(0.0160)	(0.0275)
ASYM	0.0021	0.0038	0.0013	0.0002	0.0046	-0.0025
	(0.0017)	(0.0033)	(0.0014)	(0.0036)	(0.0032)	(0.0067)
FINCONST	-0.0001	-0.0005***	0	-0.0004	0.0005**	-0.0024**
	(0.0001)	(0.0002)	(0.0001)	(0.0005)	(0.0002)	(0.0012)
cons	0.0408**	0.0542**	0.0299*	0.1685***	0.1119**	0.1295**
	(0.0167)	(0.0256)	(0.0153)	(0.0458)	(0.0550)	(0.0620)
Industry	Included	Included	Included	Included	Included	Included
Year	Included	Included	Included	Included	Included	Included
1st stage regression						
PCTPC_IND	2.4725***	2.1473***	2.6762***	2.4856***	2.4595***	2.6486***
	(0.6489)	(0.7526)	(0.7082)	(0.6513)	(0.6458)	(0.7154)
BOC AGE	0.0471***	0.0561***	0.0359***	0.0466***	0.055***	0.0381**
	(0.0114)	(0.0135)	(0.0121)	(0.0115)	(0.0135)	(0.0159)
BOC EDU	0.9274***	1.0481***	0.8704***	0.9205***	0.8847***	0.9585***
	(0.1737)	(0.2092)	(0.1801)	(0.1753)	(0.2114)	(0.2509)
Cons	-6.1529***	-6.8584***	-5.4152***	-6.1132***	-6.5449***	-5.7279***
	(0.9070)	(1.1018)	(0.9769)	(0.9061)	(1.0705)	(1.2017)
Fisher's z (LR)	0.2559***	0.1323	0.6684***	0.1152	0.3764	0.0454
	(0.0949)	(0.1120)	(0.1599)	(0.0863)	(0.2585)	(0.1121)
Ln Std. Dev	-3.2207***	-3.067***	-3.6263***	-2.3157***	-2.4452***	-2.3527***
	(0.0416)	(0.0423)	(0.0676)	(0.0634)	(0.1086)	(0.0947)
Number of obs	1,552	780	772	1,542	938	604
Wald chi2(25)	155.07***	122.30***	138.32***	6068.79***	236.87***	5020.44***
Wald test of indep. eqns.	7.28***	1.40	17.47***	1.78	2.12	0.16

Notes: Heckman treatment effect regression using maximum likelihood with firm clustering and robust standard error with alternative models. . Columns 1-3 report regression coefficients and robust standard errors in parentheses for MEDIAN INDUSTRY model, where the abnormal investment is the value of inefficient investment minus the median value of the distribution of the abnormal investment of all firms belonging to the same industry as the firm in that year from the main regression result of Richardson(2006). Columns 4-6 report regression coefficients and robust standard errors in parentheses for BIDDLE model, where the abnormal investment is the value of the residual from Biddle (2009) model. PC-FIT is the fitted value of PC variable from the first stage regression with three instrumental variables (PCTPC_IND, BOCAGE and BOCEDUC). *, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively (two-tailed). Variables definitions are reported in Table 6.1.

While both results on the overall investment inefficiency are similar to the main regression results, the results regarding over-investment and under-investment inefficiency differ between the two alternative models. One possible explanation for the differing results for the over and under-investment inefficiency is that the different models create a different number of subsamples for each of them. The main regressions have a 31:69 split between the over and under-investment samples, the median industry model splits the samples evenly (50:50) while the Biddle model has a 61:39 split between over and under-investment samples.

6.6.2 Political connections, ownership types and investment inefficiency

There are three major types of controlling ownership in the Indonesian capital market: family as controlling ownership (57%), state-owned enterprises (14%) and widely held corporation ownership (13%) (Carney and Hamilton-Hart, 2015). In this section, we analyse the effects of different types of owners based on those three major types of controlling shareholders on the Indonesian capital market: family firms (FAM), state-owned enterprises (SOE), and corporations (CORP). The classification for each type of ownership is based on the ultimate shareholders of the firm.

Information regarding the identity of the ultimate shareholders is mainly hand-collected from the annual reports, with missing data supplemented from the IPO prospectus, tax amnesty filing, Capital IQ (Compustat) database and other relevant and reliable sources (i.e. market screener, Yahoo finance, etc).

FAM is a dummy variable with the value of 1 if the ultimate shareholders are family firms, and 0 otherwise. SOE is a dummy variable with the value of 1 if the ultimate shareholders are government, and 0 otherwise. CORP is a dummy variable with the value of 1 if the ultimate shareholders are corporations, and 0 otherwise. To avoid overlapping between the three categories, a firm can only have one dummy variable of 1 among the three ownership type dummies.

Regarding family ownership, there are two mixed views regarding the role of family ownership on firms' investment inefficiency. The first view believes that family ownership is related to a higher level of investment inefficiency (Xu et al., 2013; Liu et al., 2015a), while the second view believes that family ownership is related to a lower level of investment inefficiency (Pindado et al., 2011).

Family ownership is associated with risk averseness (González et al., 2013) and a short-term project approach to investment (Anderson et al., 2012). Firms with family as

controlling shareholders prefer investment in tangible (fixed) assets (Anderson et al., 2012), are less likely to engage in risky projects (Chen and Hsu, 2009; Anderson et al., 2012), and are associated with a lower level of investment in research and development (Chen & Hsu, 2009; Anderson et al.).

There are two possible results from this approach. First, family ownership is related to a higher level of investment inefficiency, especially under-investment problems (Xu et al., 2013; Liu et al., 2015a). Second, family ownership is related to a lower level of investment inefficiency due to its more conservative approach to investment (Pindado et al., 2011).

Regarding state-owned enterprises (SOE) as controlling ownership, previous studies mostly suggest that government ownership is associated with excess employment and excess investment (Chen et al., 2011c), which leads to a higher level of investment inefficiency (Chen et al., 2011c; Chen et al., 2017a; Chen et al., 2017b).

Meanwhile, previous studies suggest contradicting results regarding controlling ownership by corporations. On the one hand, a widely held corporation is seen as the ideal type of ownership to mitigate the possibility of expropriation by controlling shareholders (Claessens et al., 2000a) and to have a positive effect on reducing investment inefficiency (Anderson et al., 2012). On the other hand, since corporation ownership eliminates the existence of a single and powerful controlling shareholder, managers may have more incentives to engage in opportunistic activities (Graham et al., 2005; Chi et al., 2015).

The results in Table 6.9 seems to indicate that all types of controlling shareholders are related to the reduction of investment inefficiency, since all types of controlling shareholders (FAM, SOE, CORP) have a negative relationship with all measures of investment inefficiency (INEFF, OVER, UNDER), which would support the notion of responsible behaviour of controlling shareholders of listed firms in Indonesia.

However, there are only two statistically significant relationships for these different types of controlling shareholders. The existence of a corporation as controlling shareholders, CORP, has a negative and statistically significant relationship with the overall investment inefficiency measures, INEFF, at the 5% level, while the existence of state-owned enterprises as controlling shareholders, SOE, has a negative and statistically significant relationship with under-investment inefficiency measures, UNDER, at the 5% level.

Table 6-9. Regression results for the effect of different types of ownership on investment inefficiency

	INEFF	OVER	UNDER
	1	2	3
PC-FIT	-0.0142***	-0.0165*	-0.0129**
	(0.0052)	(0.0100)	(0.0052)
FAM	-0.0100	-0.0374	-0.0072
	(0.0061)	(0.0321)	(0.0066)
SOE	-0.0127	-0.0310	-0.0187**
	(0.0086)	(0.0337)	(0.0083)
CORP	-0.0128**	-0.0391	-0.0077
	(0.0064)	(0.0323)	(0.0068)
PBOARD	-0.006**	-0.0017	-0.0053**
	(0.0026)	(0.0048)	(0.0024)
WEDGE	-0.0008	-0.0075	0.0065
	(0.0072)	(0.0126)	(0.0069)
CG	-0.0028	-0.0042	0.0006
	(0.0134)	(0.0244)	(0.0123)
DPR	0.0011	-0.0021	0.0023
	(0.0042)	(0.0080)	(0.0038)
SIZE	-0.0016**	-0.0021	-0.0016**
	(0.0007)	(0.0013)	(0.0007)
AGE	-0.0051*	-0.0073	-0.0006
	(0.0028)	(0.0046)	(0.0023)
FCFTA	-0.0039	0.0350	-0.0540***
	(0.0144)	(0.0269)	(0.0119)
CASHHOLD	0.0281**	-0.024	0.0469***
	(0.0141)	(0.0247)	(0.0134)
TANG	0.0540***	0.0822***	0.0248***
	(0.0058)	(0.0105)	(0.0045)
ASYM	0.0023	0.0038	0.0018
	(0.0015)	(0.0031)	(0.0014)
FINCONST	-0.0002*	-0.0006***	0.0000
	(0.0001)	(0.0002)	(0.0001)
Cons	0.0735***	0.1046***	0.0600***
	(0.0142)	(0.0396)	(0.0133)
Industry	Included	Included	Included
Year	Included	Included	Included
1st stage regression			
PCTPC_IND	2.4708***	1.6936**	2.8258***
	(0.6490)	(0.8112)	(0.6803)
BOC AGE	0.047***	0.0548***	0.0408***
	(0.0115)	(0.0146)	(0.0125)
BOC EDU	0.93***	1.0168***	0.921***
	(0.1737)	(0.2341)	(0.1792)
_cons	-6.1541***	-6.4051***	-5.9605***
	(0.9094)	(1.2318)	(0.9790)
Fisher's z (LR)	0.2459***	0.1302	0.463***
	(0.0874)	(0.1228)	(0.1387)
Ln Std. Dev	-3.2989***	-3.0643***	-3.6866***
	(0.0433)	(0.0451)	(0.0549)
Number of obs	1,552	599	953
Wald chi2(27)	210.94***	130.32***	173.97***
Wald test of indep. eqns.	9.06***	1.26	11.25***

Notes: Heckman treatment effect regression using maximum likelihood *t*-statistics calculated based on the robust standard errors clustered at firm-level. INEFF, OVER and UNDER is similar measure with the main regression in Table 5.6. PC-FIT is the fitted value of PC variable from the first stage regression with three instrumental variables (PCTPC_IND, BOCAGE and BOCEDUC). FAM is firms with family as controlling shareholder, SOE is state-owned enterprises and CORP is firms with corporations as controlling shareholder. Columns 1,2&3 report regression coefficients and robust standard errors in parentheses. *, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively (two-tailed). Other Variables definitions are reported in Table 6.1.

6.6.3 Alternative financial constraints models

Besides the Kaplan and Zingales indexes developed by Lamont et al. (2001), there are also other indexes that can be used to measure financial constraints. For a robustness check in this study, we use the financial constraints index developed by Hadlock and Pierce (2010), which will subsequently be called the HP index in this study.

The HP index is developed based on the notion that firm size and age are particularly useful predictors of financial constraint levels, and a valid measure of financial constraints can be constructed using these two factors only. The HP index is calculated as follows:

$$HP\ Index = (-0.737xSize) + (0.043\ x\ Size^2) - (0.040\ x\ Age) \quad (5.3)$$

where Size is the natural logarithm of inflation-adjusted book value of total assets, and Age is the number of years the firm has been listed on the stock exchange.

Table 5.12 shows the regression results with the HP index as the control variable to measure financial constraints. Political connections have a negative and statistically significant relationship, at the 5% level, with INEFF, the measures of the overall magnitude of investment inefficiency, and a negative and statistically significant relationship with UNDER, the measures of investment inefficiency in firms with an under-investment problem, also at the 5% level. There is a slight difference between the main regression results using the KZ index and the robustness check using the HP index regarding the role of political connectedness in reducing investment inefficiency for firms with an over-investment problem. The robustness check does not show a statistically significant relationship between political connections for firms with an over-investment problem, as opposed to statistically significant results at the 10% level for the main regression.

Besides political connections, there are also slightly different results regarding the firm size and firm age control variables, which is understandable since the HP index relies on these two control variables as the main factors to estimate the level of financial constraints. Other than that, all other results are similar. Overall, the robustness check results also support our main hypothesis regarding the role of political connectedness in reducing investment inefficiency.

Table 6-10. Treatment effect regression using HP index as Financial Constraints

	INEFF	OVER	UNDER
	1	2	3
PC-FIT	-0.0119**	-0.0133	-0.0123**
	(0.0053)	(0.0101)	(0.0054)
TOP 5	-0.0088	-0.0090	-0.0005
	(0.0073)	(0.0135)	(0.0064)
PBOARD	-0.0045*	-0.0023	-0.0044*
	(0.0025)	(0.0050)	(0.0024)
WEDGE	0.0003	-0.0122	0.0092
	(0.0072)	(0.0126)	(0.0070)
CG	0.0039	0.0209	-0.0021
	(0.0128)	(0.0223)	(0.0125)
DPR	0.0035	0.0039	0.0033
	(0.0037)	(0.0084)	(0.0032)
SIZE	0.0004	0.0021	-0.0005
	(0.0009)	(0.0019)	(0.0009)
AGE	-0.0067***	-0.0118**	-0.0021
	(0.0028)	(0.0049)	(0.0022)
FCFTA	-0.0043	0.0394	-0.0546***
	(0.0147)	(0.0277)	(0.0124)
CASHHOLD	0.0265***	-0.0202	0.0447***
	(0.0128)	(0.0237)	(0.0126)
TANG	0.0523***	0.0739***	0.0255***
	(0.0055)	(0.0101)	(0.0044)
ASYM	0.0021	0.0024	0.0016
	(0.0015)	(0.0030)	(0.0015)
FINCONST	-0.0066***	-0.0146***	-0.0032
	(0.0022)	(0.0045)	(0.0021)
Cons	0.0283	-0.0032	0.0359**
	(0.0184)	(0.0359)	(0.0180)
Industry	Included	Included	Included
Year	Included	Included	Included
1st stage regression			
PCTPC_IND	2.4878***	1.7456**	2.8287***
	(0.6488)	(0.8093)	(0.6795)
BOC AGE	0.0477***	0.0554***	0.0414***
	(0.0115)	(0.0146)	(0.0127)
BOC EDU	0.929***	1.0107***	0.9233***
	(0.1740)	(0.2338)	(0.1794)
_cons	-6.2026***	-6.4602***	-6.0017***
	(0.9129)	(1.2322)	(0.9883)
Fisher's z (LR)	0.2224***	0.1319	0.4543***
	(0.0880)	(0.1204)	(0.1440)
Ln Std. Dev	-3.3043***	-3.0621***	-3.688***
	(0.0432)	(0.0456)	(0.0550)
Number of obs	1,560	602	958
Wald chi2(25)	186.46***	118.91***	154.67***
Wald test of indep. eqns.	7.30***	1.29	10.22***

Notes: Heckman treatment effect regression using maximum likelihood *t*-statistics calculated based on the robust standard errors clustered at firm-level. INEFF, OVER and UNDER is similar measure with the main regression in Table 6.4. PC-FIT is the fitted value of PC variable from the first stage regression with three instrumental variables (PCTPC_IND, BOCAGE and BOCEDUC). FINCONST is financial constraints measure using HP index. Columns 1,2&3 report regression coefficients and robust standard errors in parentheses. *, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively (two-tailed). Other Variables definitions are reported in Table 6.1.

6.7 Summary and concluding remark

Our analysis of 265 non-financial firms on the Indonesian Stock Exchange during the 2010-2015 period finds a negative and statistically significant relationship between political connectedness and firms' overall level of investment inefficiency and in the firms with over-investment inefficiency subsample.

The results in this study contribute to the political connections literature by giving evidence showing that even in a developing country with a weak legal system and a high level of ownership concentration like Indonesia, political connections can become a tool to mitigate firms' investment inefficiency. The results of this study also support the notion that changes in institutional settings can also change the behaviour of political connectedness. A democratic system, free press, transparency and accountability make politicians act responsibly, even in a developing country with a high level of corruption and the presence of big business groups, such as Indonesia. Governments and international regulatory institutions around the world could explore whether the existence of these same elements would also have the same effect in other developing countries.

This study also confirms the influential role played by corporate governance quality, financial constraints, and information asymmetry on firms' investment inefficiency. This study's results suggest that political connectedness and corporate governance quality have a complementary, instead of substitutionary, relationship in Indonesia. The role of political connections in reducing firms' investment inefficiency is only effective in firms with a higher corporate governance quality.

Similar results also appear in the subsamples of firms without financial constraints and firms with a higher level of information asymmetry. Both financially unconstrained firms and firms with a higher level of information asymmetry are associated with a higher potential for investment inefficiency. The significant role of political connections in reducing all types of investment inefficiency (over, under and overall investment inefficiency) for these subsamples of firms further strengthens the argument to support the view that political connections can act as a corporate governance tool to mitigate the problems of investment inefficiency.

The results also indicate that the improvement of corporate governance quality may also influence the behaviour of controlling shareholders with regard to firm-level investment inefficiency. All types of controlling shareholders (family, SOE and corporation) have a negative relationship with all measures of investment inefficiency measures, although there are only two statistically significant relationships among these different types of ownership: corporation ownership with overall investment inefficiency

and SOE with under-investment inefficiency. Moreover, the involvement of the founder and/or their family member as board members of the firm also has a positive effect in reducing investment inefficiency, especially for firms with an under-investment inefficiency problem.

This study is limited in several ways. The sampling period is limited to 2010-2015 since extensive and detailed non-financial and corporate governance-related data are mostly unavailable for many firms before the 2010 period, while the collection of detailed data beyond 2015 would stretch the research beyond the maximum time period available for the researcher to complete the study.

The limitation of available data also forces us to use a modified version of the corporate governance index to investigate the effect of a higher level of corporate governance quality on the relationship between political connections and investment inefficiency.

CHAPTER 7

CONCLUSIONS

7 Conclusions

This thesis aims to provide additional insights into the understanding of several issues relating to political connectedness, firms' internal conflicts of interests, earnings management, and investment inefficiency in the Indonesian capital market. It also aims to explore the trade-off relationship between political connections and corporate governance quality. The primary motivation of this thesis is the scarcity of studies that provide empirical evidence to support the accountable behaviour of politicians in politically connected firms.

7.1 The findings of the thesis

Chapter 2 reveals the unique characteristics of the Indonesian setting. Indonesia experienced a significant change in its political system, which led to a fundamental reform of the financial institutions, an improvement in transparency and corporate governance quality, the adoption of international accounting standards, and the implementation of new laws and regulations that limit controlling shareholders' power and improve the protection system for investors, especially minority shareholders. Despite the improvement of the corporate governance and investor protection system, Indonesia is still regarded as a country with a weak legal and investor protection system. This concern is also exacerbated by the high level of ownership concentration by controlling shareholders in the Indonesian capital market.

The descriptive analysis performed in Chapter 3 reveals the possibility of accountable behaviour of politically connected firms as well as the possibility of a complementary relationship between political connections and corporate governance quality since, on average, politically connected firms across various industry sectors have a higher corporate governance index score, a higher level of disclosure and a higher probability of appointing big four public accounting firms. The analysis also shows that the presence of large/dominant controlling shareholders can cause a conflict of interest between major and minor shareholders (i.e., principal- principal conflict) and between managers and shareholders (i.e., agent-principal conflict).

Chapter 4 examines whether political connections are reducing or increasing the level of firms' internal conflicts of interest within the firm. The other receivables ratio is used as the proxy for the principal-principal conflict measure, while the interaction between growth opportunities and free cash flow is used as the proxy for the agent-principal conflict measure. The empirical results show a negative and statistically significant relationship between political connectedness and both measures of firms' internal conflicts of interest. These results indicate that political connectedness is related

to the reduction of principal-principal and agent-principal conflicts in Indonesia. Further analysis shows a complementary relationship between political connections and corporate governance quality and that political connection can act as a corporate governance mechanism that reduces the level of firms' internal conflicts of interest for firms with a higher level of information asymmetry. However, the additional analysis shows that the effectiveness of political connections in reducing firms' internal conflicts of interest is contingent on the existence of a good corporate governance system. The results show that political connections can increase internal conflicts of interest in firms with low corporate governance quality.

Chapter 5 investigates the relationship between political connections and earnings management activities. The empirical results show that political connections are related to a lower level of both real and discretionary accruals earnings management activities. Furthermore, the results also indicate that managers of well-connected firms use both types of strategies concurrently to manage earnings. Further analysis shows that the effectiveness of political connections is contingent on the existence of a good corporate governance system. The results demonstrate that political connections are associated with lower earnings management in firms with good corporate governance and those audited by big four auditors. Similar to Chapter 3, in firms with low corporate governance quality and low audit quality, political connections can increase the level of earnings management activities.

Chapter 6 investigates the relationship between political connections and investment inefficiency. The results of the empirical analyses reveal a significant role of political connections in alleviating investment inefficiency. Moreover, the results on the joint effect of political connections and corporate governance quality show a complementary relationship between political connections and corporate governance quality in reducing the level of investment inefficiency. However, while not effective in reducing investment inefficiency for firms with low corporate governance quality, political connections do not exacerbate the problem either. Furthermore, political connections can also act as a corporate governance tool and reduce the level of firms' investment inefficiency for firms with a higher level of information asymmetry.

Overall, the results show consistently that political connections are related to a lower level of firms' internal conflicts of interest, a lower level of earnings management activities, and a lower level of investment inefficiency (in the form of over-investment, under-investment or for the overall magnitude of investment inefficiency). These results support our notion that political connections can be used as a governance device to

mitigate firms' internal conflicts of interest, earnings management activities and investment inefficiency. Moreover, the empirical results also provide evidence of the complementary relationship between political connections and corporate governance quality. Political connectedness is more effective in mitigating firms' internal conflicts of interests, earnings management activities and investment inefficiency in firms with a higher level of corporate governance quality.

The main conclusions of this thesis can be summarised as follows. The behaviour of politicians, managers and owners in politically connected firms is influenced by a combination of internal and external factors, such as firm structure, institutional setting, and corporate governance. In a situation where the transparency level is high, the corporate governance system is working well, and politicians, managers and business owners can be held accountable for their actions, these people will act accountably and responsibly. However, these responsible actions are a by-product of the situation and are not necessarily inherent. In the absence of a good corporate governance system and transparency, politicians, managers, and business owners can act opportunistically.

7.2 The contributions of the thesis

The results of this study contribute to the existing political connections literature in several ways. First, as far as we know, this is the first study that thoroughly present the accountable role of politically connected firms on reducing principal-principal and principal-agent conflicts, mitigating real and discretionary accruals earnings management activities and the improvement of investment efficiency. This paper extending the work by Bona-Sanchez et al. (2014, 2019), which gives partial evidence on the possibility of political connections in improving earnings informativeness (Bona-Sanchez et al., 2014) and the role of political connections in improving earnings informativeness specifically for family firms (Bona-Sanchez et al., 2019).

Second, based on our knowledge, this is also the first study that gives novel evidence on the complementary relationship between political connections and corporate governance quality. Our results provide novel evidence and contradict previous studies suggestion regarding the substitutionary relationship between political connectedness and corporate governance quality (Chaney et al., 2011; Boubakri et al. 2012a; 2012b). As such, the empirical evidence from this study fill the current void on the literature and provides a new avenue of research that can compare substitutionary and complementary relationship between political connections and corporate governance between different countries and different institutional settings.

Third, this study complements previous studies on the role of political connections on principal-principal and principal-agent conflicts. Most studies that test firms' internal conflicts of interest focus only on one type of conflict, either principal-principal conflict (Li and Qian, 2013; Sun et al., 2016) or agent-principal conflict (Su et al., 2014; Ding et al., 2016), while this study provides further information about the impact of political connections on both types of conflicts. Political connectedness can be used as a corporate governance tool to reduce the potential expropriation activities by managers and by major shareholders. Minority shareholders can see the appointment of a politically connected board member(s) as a signal of commitment from controlling shareholders to protect their interests.

Fourth, the results of this study also complement previous studies on the relationship between political connections and earnings management. This study contributes to the existing debate between the trade-off (substitutionary relationship) between real and discretionary accruals earnings management activities (Cohen and Zarowin, 2010; Enomoto et al., 2015; Kothari et al., 2016; Choi et al., 2018) or simultaneous use (complementary relationship) of both types of earnings management activities by managers (Ibrahim et al. 2011; Chen et al., 2012a) and their relationship with political connectedness. The results from this study support the notion that managers in developing countries such as Indonesia use both types of earnings management concurrently, and that political connectedness can be used as a tool to reduce management real and discretionary accruals earnings management activities.

Finally, the results of this study also complement previous studies on the relationship between political connections and investment inefficiency (Chen et al., 2011c; Ling et al., 2016; Chen et al., 2017a; Hou et al., 2017; Saeed et al., 2017). Previous studies suggest that the role of political connections in alleviating the under-investment inefficiency problem is usually traded with the over-investment inefficiency problem due to the opportunistic nature of the relationship and the need to pay-off the politicians in return for the benefits firms receive from the relationship. This study provides novel empirical evidence that the accountable behaviour of politicians in politically connected firms reduces both the under-investment inefficiency problem and the over-investment inefficiency problem, resulting in a lower level of overall investment inefficiency.

7.3 The limitations of the thesis

This study is limited in several ways. First, the sampling period is limited to 2010-2015 since extensive and detailed corporate governance-related data are mostly

unavailable for many firms before the 2010 period, while the collection of detailed data beyond 2015 would stretch the research beyond the maximum period available for the researcher to complete the study. The limitation of available data also forces us to use a modified version of the corporate governance index to investigate the effect of corporate governance quality on this study.

Second, there are also not enough data and information available to conduct the tests for several control variables that may also have a significant influence on the topic, such as audit committee expertise, external auditor fees, internal audit role and detailed board remuneration information and non-cash performance-related bonuses such as share options. This could be an issue for future investigation when more data and information are available.

7.4 The implications of the thesis

The results of this study should have some implications for policymakers. Contrary to previous studies on the substitutive relationship between political connections and corporate governance quality, the results show a complementary relationship between political connections and corporate governance quality. This study suggests that the existence of the democratic political system, the improvement of corporate governance quality and the restrictions on active politicians and public servant to engage in business activities during the period of their service can lead to responsible behaviour by politicians serving as the board members of politically connected firms.

These findings can provide the basis for regulators in many countries that experience the opportunistic and negative impact of political connectedness to emphasise the effectiveness of several corporate governance measures and mechanisms to mitigate the negative effects of political connectedness. Having former politicians as independent non-executive board members may generally keep the benefits of having political connections while reducing the cost of the connections, as long as there is a high level of transparency and a good corporate governance system.

Moreover, since the implications of the research are also relevant to several governing and regulatory bodies in Indonesia, the findings of the research along with several recommendations for changes and improvements to the current regulations will also be offered for presentation to the Indonesian Financial Services Authority (OJK), which is responsible for setting the Indonesian capital market regulations; the board of directors of PT.Bursa Efek Indonesia (BEI), which runs the Indonesian stock market; and Ikatan Akuntan Indonesia (IAI), the Indonesian accounting body, which is responsible

for setting the accounting standards in Indonesia. These bodies may want to adopt stricter regulations, such as limiting the usage of other receivable activities for tunnelling activities by requiring the disclosure level to be similar to the account receivables and banning non-interest loans to related parties.

The relationships studied here are also important to enhance researchers' understanding of the role of political connectedness on the firms' internal conflicts of interest, earnings management, and investment inefficiency in the presence of large/dominant controlling shareholders. Several discoveries, such as the positive relationship between corporate governance quality and principal-principal conflict and the concurrent use of real and discretionary accruals earnings management activities by firms in Indonesia, offer fertile ground for further theoretical and empirical research.

The positive relationship between corporate governance quality and principal-principal conflict can be caused by two possibilities: the tolerance level of minority shareholders toward certain related party transactions or the fact that improved corporate governance quality forces controlling shareholders to be more discreet and use more secretive and hard to detect activities, such as non-formal related party transactions using the undisclosed other receivables account. Therefore, more research is needed to explore the relative costs and benefits of disclosed and undisclosed related party transactions. Regulators may also want to apply more strict rules to the other receivables account, such as requiring this account to be disclosed in the same manner as the account receivables to reduce tunnelling activities via the other receivables account.

The concurrent use of real and discretionary accruals earnings management activities challenges the conventional wisdom that there is a trade-off on the use of real and discretionary accruals earnings management activities and that managers are only using one type of activities and switch to another depending on a country institutional setting. Thus, more research on the concurrent use of both types of earnings management activities may broaden our understanding of the earnings management topic.

Further measures may also be required by the auditors of Indonesian firms to detect both types of earnings management activities during the audit process. Therefore, the results of this study will also be shared with the Institut Akuntan Publik Indonesia (IAPI), the Indonesian public accountant body, which is responsible for setting the auditing standards and providing certification for auditors in Indonesia.

7.5 Avenues for further research

The results of this study provide several avenues for future research. First, there is a need to develop more research that explores the accountable behaviour view of politically connected firms, both in developed and developing countries, to gain a more comprehensive understanding of the topic.

Second, whereas the focus of the current study is restricted by the availability of data, future research in the same setting as this study or in different settings that provide more detailed information about various corporate governance characteristics would provide further evidence and complement the current knowledge of the topic.

Third, several questions also need further investigation. For example, what are the actual costs and benefits of related party transactions? To what extent can the controlling shareholders of a firm use related party transactions, either through formal business transactions (account receivables) or non-formal business transactions (other receivables) before they become expropriation activities? How effective is the concurrent use of real and discretionary accruals earnings management activities in achieving earnings targets? Is there any strategic reasoning behind the simultaneous use of both types of earnings management activities? Studies that provide answers to such questions might improve the understanding of the potential effects and implications of earnings management.

Finally, another interesting avenue for future research is investigating the joint effect of political connections and other corporate governance measures and specific board characteristics such as CEO remuneration, audit committee expertise, internal auditor role, external auditor fees, etc on various aspect of the firms such as earnings management activities, investment inefficiency, financial performance, risk management, etc. Conducting further research when there is more available information would further complement our understanding of the relationship between political connections and corporate governance.

7.6 Reflections

Upon reflections, there are so many valuable lessons learned throughout my PhD study. There are many factors that could influence a PhD student experience. For me personally, these factors can be categorised into two categories : internal and external factors. The main internal factors are mental preparedness and motivation. Doing a PhD is a lonely journey, and you need to be able to work independently, manage your time effectively and efficiently, and maintain your level of motivation throughout the long and arduous journey.

There are several external factors that could help you better manage your internal factors. In my case, the presents of my family with me throughout most of my study period is one major factor in maintaining my motivation and keeps me mentally balanced throughout the process.

The next major external factor is my relationship with my supervisors. I considered myself lucky to have two very dedicated supervisors who provided support, constructive criticism, and sound advice throughout my PhD study.

The third external factor that also has a big influence on my PhD study is the facilities and infrastructures available to support my study from the University. The availability of financial databases such as Bloomberg, access to various online journals through the library website and dedicated space for PhD students are essentials requirements for me as a PhD student.

On hindsight, there are several things that may better help me complete my PhD study. The process of hand-picking manual data collection from Indonesian's firm annual report takes about a one-year period. Although the length of the process could not be reduced, it may save some time on my PhD process if some of the processes had already started before my PhD study started.

The plan for me and both of my supervisors was to go to several conferences after the submission of my thesis. We even have our paper accepted by several conferences. The plans have to be cancelled because of Covid-19. However, I will not complain about this situation because I think I am actually in a better position than other PhD students since I had almost completed my thesis writing when the lockdown process in the United Kingdom went into effect.

Finally, I still hope that all three empirical chapters from this study can be published in international journals with good ratings and reputations. Me and both my supervisors are still working on this process hope that the papers based on this thesis can be published as soon as possible.

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Appendix 1. Corporate Governance Quality Index

NO	Items	Assumed impact on Corporate Governance	Justification
A	**Board Effectiveness**		
1	Major shareholders in BOC (Included/No)	Included=negative impact	Major shareholders can influence the supervising function
2	Major shareholders in BOD (Included/No)	Included=negative impact	Major shareholders can influence the management decision making
3	Independent CEO (Included/No)	Included=positive impact	Board Leadership is independent from majority shareholders interest
4	% of Independent Commissioners on the BOC	Higher value=positive impact	Greater independence and objectivity of the board
5	% of female members on BOC	Higher value=positive impact	Improved board decision-making due to more diverse perspectives
6	% of female members on BOD	Higher value=positive impact	Improved board decision-making due to more diverse perspectives
7	% of foreign members on BOC	Higher value=positive impact	Improved board decision-making due to more diverse perspectives
8	% of foreign members on BOD	Higher value=positive impact	Improved board decision-making due to more diverse perspectives
9	Fewer than 8 or more than 15 board members (Included/No)	Included=negative impact	Outside of this range, sub-optimal board decision making due to either excessively narrow or unwieldy board size
10	Number of BOC meetings held	Higher value=positive impact	Higher level of board diligence and commitment
11	Number of BOD meetings held	Higher value=positive impact	Higher level of board diligence and commitment
12	% of BOC meeting attendance	Higher value=positive impact	Higher level of board diligence and commitment
13	% of BOD meeting attendance	Higher value=positive impact	Higher level of board diligence and commitment
14	Average BOC members tenure	Higher value=negative impact	High values could indicate lack of board independence and/or the entrenchment of long serving commissioners
15	Average BOD members tenure	Higher value=negative impact	High values could indicate lack of board independence and/or the entrenchment of long serving directors

NO	Items	Assumed impact on Corporate Governance	Justification
B	**Audit & Risk**		
16	Auditor Fee disclosure (Included/No)	Included=positive impact	Indicative of higher level of transparency and auditor role
17	Size of audit committee	Higher value=positive impact	Indicative of a higher level of audit committee expertise
18	Number of audit committee meeting	Higher value=positive impact	Higher level of audit committee diligence and commitment
19	% of AC meeting attendance	Higher value=positive impact	Higher level of audit committee diligence and commitment
20	Risk Management System disclosure (Included/No)	Included=positive impact	Indicator for company preparation level to manage risk
21	Risk Management Evaluation disclosure (Included/No)	Included=positive impact	Indicator for company preparation level to manage risk
22	Risk Management Types disclosure (Included/No)	Included=positive impact	Indicator for company preparation level to manage risk
23	Risk Management Implementation disclosure (Included/No)	Included=positive impact	Indicator for company preparation level to manage risk
24	Internal Control system disclosure (Included/No)	Included=positive impact	Indicator for proper internal control monitoring process
25	Internal Control alignment with COSO (Included/No)	Included=positive impact	Indicator for proper internal control monitoring process
26	Internal Control Evaluation disclosure (Included/No)	Included=positive impact	Indicator for proper internal control monitoring process
C	**Board Remuneration**		
27	Average board salary/compensation	Higher value = negative impact	Could be suggestive of a lack of robust oversight over board compensation
28	Remuneration policy disclosure (Included/No)	Included=positive impact	Indicator of transparency on remuneration system
29	Remuneration committee disclosure (Included/No)	Included=positive impact	Indicator of transparency on remuneration committee process
30	Board assessment policy disclosure (Included/No)	Included=positive impact	Indicative of a link between board compensation and firm performance

NO	Items	Assumed impact on Corporate Governance	Justification
D	**Shareholder Relation**		
31	Return on Equity	Higher value=positive impact	The board are committed to shareholders interest
32	Share price volatility over last 5 years period	Higher value = negative impact	Could indicate shareholders concerns with the governance of the company
33	Does the company have a policy to apply the one-share, one vote-principle	Included=positive impact	Greater power enjoyed by minority shareholders
34	No dual class unequal voting rights - common shares (Included/No)	Included=positive impact	Greater power enjoyed by minority shareholders
E	**Stakeholder Relation**		
35	Environmentally related CSR disclosure (Included/No)	Included=positive impact	A commitment to environment
36	Workers safety, health, and development related CSR disclosure (Included/No)	Included=positive impact	A commitment to employee
37	Social, Product & Consumers related CSR disclosure (Included/No)	Included=positive impact	A commitment to society & consumers
38	Whistleblowing system and protection system for whistle-blowers disclosure	Higher value=positive impact	A commitment to good corporate governance of company

Source: Modified from Institute of Directors 2017 Corporate Governance Index(Institute of Directors, 2017)

We are following the Institute of Director Corporate Governance Index measurement to construct an overall score for each company, to quantify and combine our data in a clear and comparable manner. For indicators that are a "Included/no" answer, the process is quite simple. If an affirmative value of the indicator is considered to be positive for governance, such as disclosing auditor fee, then the score is 1 for "Included" and zero for "no". If, however, an affirmative value of the indicator is considered to be negative for governance, such as a board size with "fewer than eight or more than 15 directors", then the score is zero for "Included" and 1 for "no".

For indicators that are continuous, such as "Return on Equity", the comparison across companies becomes more complex, so we rely on a process known as minimum–maximum normalisation. If a higher value of the indicator is considered to be positive for governance, the company with the highest value is awarded 1, and the company with the lowest value is awarded zero.2 For all other companies the score is 1 time the difference between their value and the

minimum divided by the difference between the maximum and minimum according to the following formula:

$$Indicator\ Score = 1\ X\ \frac{Company\ Indicator\ Value - min\ (Indicator\ Value)}{max\ (Indicator\ Value) - min\ (Indicator\ Value)}$$

If higher values of the indicator are seen as a negative barometer of corporate governance– for example, an indicator which measures share price volatility – we follow the same process but subtract the factor score from 1. Where data for an indicator is not available for a particular company, they are awarded the average factor score.

We then calculated the arithmetic average of each of the standardised indicator scores for each of the five broad corporate governance categories. This allowed us to create a score for each company in the sample.

Appendix 2. Endogeneity, Relevance and Validity tests for failed instruments

Endogeneity, Relevance and Validity tests for failed instruments for Internal Conflicts chapter

OREC		QFCF	
Durbin-Wu Hausman test for endogeneity			
F (1, 264)	5.63**	F (1, 264)	3.41*
F-test of instruments relevance			
F (3,1585)	31.17***	F (3,1585)	31.17***
J-test of instruments exogeneity			
J	7.28***	J	4.24**

This table reports the Durbin-Wu Hausman (DWH) endogeneity test, F test of instrument relevance and J-test of instrument validity. Significant results of DWH tests indicate the existence of endogeneity, Significant F-test results with F-value score above 10 (Staiger and Stock, 1997) or above the Stock-Yogo (2005) critical value (6.46) indicate that the instrumental variables used in the regression are relevant (strong). Non-significant results of J-test indicate exogeneity of the instrumental variables used in the regressions.*, **, and *** indicate the statistical significance at 10%, 5% and 1% levels, respectively.

Endogeneity, Relevance and Validity tests for failed instruments for Earnings Management chapter

REM		AEM	
Durbin-Wu Hausman test for endogeneity			
F (1, 264)	16.08***	F (1, 264)	4.74**
F-test of instruments relevance			
F (3,1570)	44.13***	F (3,1576)	43.68***
J-test of instruments exogeneity			
J	8.10**	J	5.53*

This table reports the Durbin-Wu Hausman (DWH) endogeneity test, F test of instrument relevance and J-test of instrument validity. Significant results of DWH tests indicate the existence of endogeneity, Significant F-test results with F-value score above 10 (Staiger and Stock, 1997) or above the Stock-Yogo (2005) critical value (6.46) indicate that the instrumental variables used in the regression are relevant (strong). Non-significant results of J-test indicate exogeneity of the instrumental variables used in the regressions.*, **, and *** indicate the statistical significance at 10%, 5% and 1% levels, respectively.

Appendix 3. OREC regression with largest and second to fifth largest shareholders

	OREC
	1
PC-FIT	-0.0516***
	(0.0099)
LS	-0.0174
	(0.0108)
LS2TO5	-0.0238*
	(0.0128)
PBOARD	-0.0013
	(0.0046)
AUD	-0.0032
	(0.0040)
CG	0.0669**
	(0.0326)
SIZE	-0.0014
	(0.0013)
AGE	0.0065**
	(0.0028)
LEV	0.0202**
	(0.0096)
TANG	-0.01**
	(0.0042)
ASYM	-0.0002*
	(0.0001)
DPR	0.0083
	(0.0059)
CFOTA	-0.0284*
	(0.0153)
ROA	-0.045***
	(0.0172)
MTB	0.0021*
	(0.0011)
cons	0.0192
	(0.0253)
Industry	Included
Year	Included
1st year regression	
PCTPC_IND	2.676***
	(0.5901)
UNEMP	0.9939**
	(0.3887)
cons	-1.4033***
	(0.2985)
Fisher's z (LR)	0.8669***
	(0.2551)
Ln Std. Dev	-3.2295***
	(0.1222)
Number of obs	1,589
Wald chi2(27)	57.83***
Wald test of indep. eqns.	11.55***

Notes: Heckman treatment effect regression using maximum likelihood *t*-statistics calculated based on the robust standard errors clustered at firm-level. OREC is the measure of principal-principal conflict and PC-FIT is the fitted value of PC variable from the first stage regression with two instrumental variables (PCTPC_IND and UNEMP). LS is the percentage of shareholding by the largest shareholders, LS2TO5 is the combine shareholding by the second to fifth largest shareholders. Columns 1 report regression coefficients and robust standard errors in parentheses.*, **, and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively (two-tailed). Variables definitions are reported in Table 3.1.