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Implications of family control for corporate governance: evidence from Chinese listed firms

Liangbo Ma
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Implications of family control for corporate governance:

Evidence from Chinese listed firms

A thesis submitted in partial fulfilment of the
requirements for the award of the degree

DOCTOR OF PHILOSOPHY

from



UNIVERSITY OF WOLLONGONG

by

Liangbo Ma

SCHOOL OF ACCOUNTING, ECONOMICS, AND FINANCE

FACULTY OF BUSINESS

2015

CERTIFICATION

I, Liangbo Ma, declare that this thesis, submitted in partial fulfilment of the requirements for the award of Doctor of Philosophy, in the School of Accounting, Economics, and Finance, Faculty of Business, University of Wollongong, is wholly my own work unless otherwise referenced or acknowledged. The document has not been submitted for qualifications at any other academic institution.

Liangbo Ma

23 June 2015

**Implications of family control for corporate governance:
Evidence from Chinese listed firms**

Liangbo Ma

Principal supervisor: Dr. Shiguang Ma

Co-supervisor: Professor Gary Tian

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List of publications

The following publications are derived from this thesis.

Refereed journal articles:

- 1) Ma, L., Ma, S. and Tian, G., 2015. Corporate opacity and cost of debt for family firms. *European Accounting Review*, Forthcoming, 1-33. (ABDC A*-ranked)
- 2) Ma, L., Ma, S. and Tian, G., 2013. Political connection, founder managers, and their impact on tunneling in China's listed firms. *Pacific Basin Finance Journal* 24, 312-339. (ABDC A-ranked)

Conference Proceedings:

- 1) Ma, L., Ma, S. and Tian, G., 2014. Does family control affect the likelihood and market reactions to restatements? Evidence from mandatory material restatements in China. *Australasian Finance & Banking Conference*, December 16-18, Sydney, Australia
- 2) Ma, L., Ma, S. and Tian, G., 2013. The impact of information opacity on the relationship between founding-family control and cost of debt. *European Financial Management Association Annual Conference*, June 26-29, Reading, United Kingdom
- 3) Ma, L., Ma, S. and Tian, G., 2012. Founding-family control, information opacity, and the cost of debt: Evidence from China. *Australasian Finance & Banking Conference*, December 16-18, Sydney, Australia
- 4) Ma, L., Ma, S. and Tian, G., 2012. Political connection, founder managers, and their impact on tunneling in China's listed firms. *China International Conference in Finance*, July 9-12, Chongqing, China
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Abstract

This thesis focuses on the implications of family control for corporate governance in the Chinese markets. This research is mainly motivated by the following factors. First, although family-controlled firms represent the predominant form of businesses in both developed and developing economies, it was not until the 1980's that family businesses emerged as a field of academic study (Casillas and Acedo, 2007). Despite a "collective sense that significant progress has been made" (Litz, Pearson, and Litchfield, 2012) in family business research, whether family control is beneficial for all shareholders, however, largely remains an open question (Morck, Wolfenzon, and Yeung, 2005; Lins, Volpin, and Wagner, 2013).

Second, prior studies commonly assume that controlling families are a homogeneous group of blockholders and existing literature provides little evidence on what are the core factors that really matter for examining the different impact of family ownership/control on agency problems in family firms. Although some studies find that the impact of family ownership depends on whether the founder is actively managing the firm (e.g., Anderson, Mansi, and Reeb, 2003; Villalonga and Amit, 2006), it can be argued that whether the founder or a descendant is the CEO does not fundamentally change the controlling family's incentives when dealing with minority shareholders and/or debtholders. Thus, more evidence is needed to reveal other firm-level factors that affect controlling family's impact on agency problems.

Third, it has been a commonly held view that privately controlled firms, of which a significant proportion is family-controlled firms, have become an important drive of China's economic growth (Allen, Qian, and Qian, 2005). However, academic research of family firms in China has been lagging not only behind family firm research in developed economies, but

also far behind the fast growth of family firms (Wei, Lin, Wu, and Li, 2013). For example, Cheng (2014) finds that only three studies that exclusively focus on Chinese family firms have been published in major international accounting and finance journals.

The need for further research in family firms in the Chinese markets, together with the view that China serves a good representative of the increasingly important emerging markets characterized by fast economic growth and relatively weak formal institutions, motives me to take this research. My study aims to address the imbalance between economic importance and lack of academic research with three essays that investigate corporate governance of Chinese family firms.

The first essay investigates the impact of managers' political connection and founder-status on the tunneling behaviour of publicly listed firms in China. The results show that private-controlled firms with founder-managers have significantly less severe tunneling than those without founder-managers. Because the former account for the majority of all family firms in China, the results thus suggest that family firms in China have less tunneling than nonfamily firms. To overcome the imperfect market mechanism and disadvantage in resource allocation, private firms have strong incentives to establish political connections. I next investigate the impact of various political connections on firm tunneling behaviour. I find that political connections, especially non-official connections at the central level, further restrain founder-manager firms from expropriating minority shareholders through tunneling.

Given the importance of debt financing for family firms, and to a broader extent, the growth of the Chinese economy, I in the second essay examine the impact of family control on debt cost. I find that overall family controlled firms pay a lower cost of debt than nonfamily firms.

However, family firms are not universal in terms of the different agency conflicts between family blockholders and outside investors (e.g., Leuz and Oberholzer-Gee, 2006; Chen et al., 2014; Lins et al., 2013). I next explore how the relation between family control and the cost of debt is affected by particular firm characteristic --- corporate information opacity, a proxy for the relative dominance of controlling shareholders' alignment and entrenchment incentives. My evidence reveals that family firms pay a lower cost of debt than nonfamily firms only when their corporate information is relatively transparent, i.e., when controlling families' alignment incentive dominates their entrenchment incentive.

In the second essay, I use either a comprehensive index or earnings quality as a measure of information opacity to examine how it affects the relationship between family control and the cost of debt. The results suggest that not all family firms are the same in terms of the level of information opacity. In the third essay, I use an alternative measure, specifically, the likelihood of accounting restatements to investigate whether family firms have better accounting information quality than nonfamily firms. Furthermore, I also examine how investors (particularly shareholders) react to the change in the quality of accounting information as proxied by the announcement of accounting restatements. The findings indicate that, compared to nonfamily firms, family firms overall are less likely to misstate and restate their financial reports. However, once a family firm announces an accounting restatement it will trigger significantly stronger and more negative reaction from shareholders than restatements by nonfamily firms. The third essay complements the second essay in that the second essay is focused on the shareholder-debtholder agency conflicts while the third essay is focused on the controlling shareholder-minority shareholder agency conflicts. Both of these two types of agency conflicts are likely to be different between family and nonfamily firms.

Overall, this thesis provides consistent evidence that family firms in China as a whole have better corporate governance practice than their nonfamily counterparts, in that the former have less tunneling, pay a lower cost of debt, and are less likely to restate their financial reports than the latter group of firms. However, the findings in this thesis also provide clear evidence that family firms, even within a country, shall be regarded as heterogeneous in terms of their impact on shareholder-shareholder and shareholder-debtholder agency relationships. Corporate information opacity and financial reporting quality can play important moderating roles in the above two agency relationships.

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Chapter One Introduction

1.1 Motivations of research

Family firms represent one of the most prevalent business and organizational forms across the world. According to Faccio and Lang (2002), about 44% of all large firms in Western Europe are family controlled; while in East Asia family control is associated with around two thirds of the publicly listed firms (Claessens, Djankov, and Lang, 2000; Claessens, Djankov, Fan, and Lang, 2002). Even in the U.S. which is regarded having one of the most dispersed ownership structures, around 35% of the S&P 500 and 46% of the S&P 1500 firms are classified as family firms (Anderson and Reeb, 2003; Chen, Chen, and Cheng, 2008). For the Chinese market, the percentage of family firms has been growing and as of 2012 stands at around 56% (Cheng, 2014).

The prevalence of family firms becomes even more significant if non-listed private firms are taken into account. For example, according to a report by the Family Firm Institute (2014, Boston, U.S), in Germany 96% of all businesses in the private sector are family businesses and they employ 55% of the whole workforce. In China the corresponding figures are 85% and 65%, respectively. Across the globe, family businesses account for around two-thirds of all businesses and generate about 70%-90% of the global GDP annually. ¹

¹ The literature has used various definitions of family firms (see e.g., Miller, Le Breton-Miller, Lester, and Cannella, 2007; Prencipe, Bar-Yosef, and Dekker, 2014 for reviews) and the figures cited here may be different in different studies, depending on the definition used. I will discuss this issue in more details in the data section of this chapter. In this thesis, I use a dummy variable (Family dummy) to denote a family firm if: (1) the founder

Despite that family businesses have been an important drive of economic development since the early stage of industrialization age (Hall, 1988), family firms as an independent field of academic research did not emerge until mid-1980s or early-1990s (Bird, Welsch, Astrachan, and Pistrui, 2002; Casillas and Acedo, 2007). Increasing academic interest and especially a surge of interest in the last decade or so has seen significant progress in the field of family firm research (Litz, Pearson, and Litchfield, 2012; Prencipe, Bar-Yosef, and Dekker, 2014). However, despite the encouraging progress, some challenges remain.

First, whether family control is beneficial for all shareholders largely remains an open question (Morck, Wolfenzon, and Yeung, 2005; Lins, Volpin, and Wagner, 2013). On the one hand, such studies as Anderson and Reeb (2003), Anderson, Mansi, and Reeb (2003), Villalonga and Amit (2006), Wang (2006), Ali, Chen, and Radhakrishnan (2007), Tong (2008), Fahlenbrach (2009), Li and Srinivasan (2011) and Isakov and Weisskopf (2014) find that family ownership, especially the first generation's presence, has a positive impact on corporate governance and performance, in that family ownership lowers agency debt cost, enhances investment efficiency, improves financial reporting quality and thus enables family firms to outperform their nonfamily counterparts.

On the other hand, some other studies document a negative impact of family control/ownership. For example, Johnson, Magee, Nagarajan, and Newman (1985) find positive stock market reaction to the sudden death of a company founder; Leon and Liu (2010) and Pi and Lowe (2010) find that it is rather difficult to remove a founder CEO even when she is incompetent; Chau and Gray (2002), Fan and Wong (2002), and Anderson, Duru, and

and members of the founding family (either by blood or through marriage) hold at least 20% of the firm's control rights; and (2) the founding family (all family members combined) is the ultimate largest shareholder.

Reeb (2009) find that corporate information is relatively more opacity in family firms; Morck, Stangeland, and Yeung (1998) find that family control is detrimental to economic development.

Finally, another group of researchers argue that the actual impact of family ownership/control is conditioned on some other factors. Miller, Le Breton-Miller, Lester, and Cannella (2007) argue that whether family firms outperform nonfamily firms depends on how family firms are defined and whether or not there is a lone founder. Maury (2006) and Ellul, Guntay and Lal (2007) find that family ownership is beneficial only when investor protection is high. Although Pindado, Requejo, and de la Torre (2011) find that family control lowers the investment-cash flow sensitivities but such an impact is conditioned on no control-ownership divergence of the controlling families.

Second, most existing studies seem to implicitly assume that controlling families, at least within a country, are homogeneous and thus have similar impact on agency problems between controlling shareholders and minority shareholders and between shareholders and debtholders. Such an assumption seems to be inconsistent with some other studies that document different incentives among family firms and how these differences affect agency problems in family firms (e.g., Leuz and Oberholzer-Gee, 2006; Lins et al., 2013; Chen, Chen, and Cheng, 2014).

Although some studies have examined the different impacts of family ownership/control on debt cost (e.g., Anderson, Duru, and Reeb, 2003) and firm performance (e.g., Villalonga and Amit, 2006) between those with founder-CEOs, descendants-CEOs, and outsider-CEOs, it is documented that CEO type and the level of ownership can affect debt cost and/or firm

performance in many ways (e.g., Claessens et al., 2000; Fahlenbrach, 2009; Li and Srinivasan, 2011; Anderson et al., 2012). In other words, these studies do not reveal the core factor that differentiates one group of family firms from the other, based on fundamental differences in agency problems. Furthermore, Lins et al. (2013) find that country-level investor protection alone does not explain such a difference. Thus, it is sensible to examine other firm-level characteristics that can distinguish among family firms in terms of their impact on agency problems.

Third, up until now the mainstream theoretical frameworks and the majority of empirical evidence in family firm research have drawn from developed markets and few from developing countries. However, China differs from both developed and other developing economies in various aspects, such as legal environment, market development, corporate governance system, culture, and etc. The literature has shown that these factors affect not only the prevalence of family firms (La Porta, Lopez-de-Silanes, and Shleifer, 1999; Amit, Ding, Villalonga, and Zhang, 2015), but also agency conflicts within a firm (Claessens, Djankov, and Lang, 2000; Dyck and Zingales, 2004; Durnev and Kim, 2005; Li, Griffin, Yue, and Zhao, 2013), and in particular the corporate governance and performance of family firms (Ellul, Guntay, and Lel, 2007; Amit, Ding, Villalonga, and Zhang, 2015). Moreover, the structure of family firm itself is influenced by the development of financial market and the availability of external finance (Masulis et al., 2011).

Family firms have been playing a significant role in the development of China's economy. For example, a report by Forbes China shows that, at the end of July 2013, family-controlled firms account for almost half of privately-controlled listed firms or 29% of all listed firms in

the Chinese A-share markets². But puzzlingly, family firms have so far attracted disproportionate academic interest when compared to other ownership type such as state-owned-enterprises (SOEs) (Cheng, 2014). Therefore, further research is required to help enhance our understanding of family firms in the Chinese market. To a broad extent, research on Chinese family firms can also contribute to a better understanding of family firms in other emerging markets as well, given that China is a good representative of emerging markets in many aspects.

1.2 Institutional background

It is well known that institutions such as legal, political, regulatory factors have important impact on behavior of market participants. China is a good representative of many emerging markets in that China has a fast growing economy and yet it has a relatively underdeveloped financial market and relatively weak institutional environment. At the same time, there are several salient features of the Chinese market that makes it a stand-out from other emerging markets.

The private sector, of which a significant proportion are family firms, has been the main drive of China's rapid economic growth over the last three decades (Allen, Qian, and Qian, 2005). Yet, private firms still face ongoing ideological discrimination by the ruling Communist Party (Liu, Tang, and Tian, 2013). Private firms are still being discriminated and disadvantaged in many areas such as the allocation of resources (e.g., land and mines) and government procurements and projects. Bank loans are disproportionately allocated to SOEs even when they are not performing. Private firms are also frequently discriminated against

² <http://finance.sina.com.cn/china/20130922/150216814955.shtml>.

when it comes to obtaining certain licenses and the enforcement of contracts with governments or SOEs. The government still retains strong control over IPO quotas even after years of reform (Liu, Tang, and Tian, 2013). Such an imperfect market mechanism highlights the importance of political capital and motivates private entrepreneurs to enter politics or to establish political connections (Li et al., 2006).

It is well known that the information environment plays a central role both in determining the extent of these conflicts and in designing the mechanisms to mitigate them (Smith and Warner, 1979; Bushman and Smith, 2001; Armstrong, Guay, and Weber, 2010). Although there are explicit stock exchange rules that prohibit false disclosure, in practice institutional factors (e.g., government control over capital markets, a lack of independent auditor, and influence of political connections) lead the Chinese markets to be frequently ranked as one of the most opaque among the world's large economies. For example, according to Piotroski and Wong (2011), China ranked the last in corporate transparency out of 35 countries surveyed by Pricewaterhouse Coopers (PwC) in 2001. In a subsequent survey by PwC in 2009, China continued to rank 38th out of 48 countries, despite significant market development during that period. Piotroski and Wong (2011) also list other reports/surveys that similarly rank China's information environment well below other major markets.

The overall opaque financial reporting environment naturally raises several important questions. Does corporate transparency still play an agency-problem-mitigating role in China, as it does in developed markets? And relatedly, given the importance of family firms in China and the different agency problems between family and nonfamily firms, is the role of corporate transparency different between family and nonfamily firms? If yes, what is the difference?

Third, as a result of the weak legal institutions formal contracts (e.g., purchasing, lending, and investment) are frequently not enforced or costly and ineffectively even when they are enforced. This suggests that informal contracting plays an important role in mitigating agency problems among different parties (Armstrong, Guay, and Weber, 2010). Consequently market participants often rely heavily on informal mechanisms in the design, negotiation, and enforcement of informal contracts (e.g., a lending contract between a creditor and a borrowing firm). Typically an informal mechanism often comprises multi-period relationship and personal reputation probably plays the most important role (Allen, Qian, and Qian, 2005) in such informal contracting. An implication of this is that family firms have a greater concern for reputation than nonfamily private firms and SOEs for the following reasons. Compared to SOEs, private firms face more difficulties and hurdles in obtaining formal financing (most notably, banking loans). Compared to nonfamily private firms, family firms are more likely to enter relationship lending in which they borrow from the same lender(s) over a long period of time (Petersen and Rajan, 1994; Anderson, Mansi, and Reeb, 2003).

1.3 Theoretical frameworks

The majority of existing family firm research applies one or more of four main theoretical frameworks, namely agency theory, resource-based view, stewardship theory, and socio-emotional wealth theory (Prencipe, Bar-Yosef, and Dekker, 2014). The foundation theoretical framework of my thesis is the agency theory, but I also apply a mix of the other three theories, given the unique institutional and family firm development background in China.

1.3.1 Agency problems in family firms

1.3.1.1 Agency conflicts between shareholders and managers

The classic principal-agent problem resulted from the separation of ownership and control (Jensen and Meckling, 1976) is commonly referred to as the Type I agency problem. The Type I agency conflict may lead agents (managers) to act opportunistically to maximize their own wealth rather than the interest of shareholders (principals). The unique characteristics of family firms mean that Type I agency problem may be mitigated in family firms compared to nonfamily firms.

First, family owners commonly have under-diversified and concentrated ownership in their firms, which enables controlling families to internalize most of the benefits from close monitoring of managers. This gives families strong incentives to monitor managers (Demsetz and Lehn, 1985) and reduces free-rider problem commonly associated with small shareholders at other firms (Shleifer and Vishny, 1986).

Second, family owners' long-term connection with their firms means that they have better knowledge about their firms' businesses than shareholders at other firms (Anderson and Reeb, 2003), which enables family owners to more easily detect managers' manipulation. Moreover, compared to nonfamily firms, the compensation of managers at family firms are less tied to accounting based performance measures (Chen, 2005). Therefore, managers at family firms have fewer incentives to manipulate. As a result, managers at family firms are more likely to align their interests with controlling families than those at nonfamily firms.

Third, it is not unusual for family members to be actively involved in the management of their firms, often taking the positions of CEOs and/or other senior management roles. This leads to not only better monitoring of nonfamily CEOs, but also naturally better alignment of interests of managers and controlling families.

1.3.1.2 Agency conflicts between dominant and minority shareholders

While family firms are often characterized with subdued Type I agency problem when compared with nonfamily firms, they have potentially more serious agency problem between the controlling families and other minority shareholders which is commonly referred to as the Type II agency problem.

Family owners' highly concentrated equity ownership gives them the capability of often unchallenged decision making power. In addition, the dominant position and authority associated with founding-family status makes family CEOs significantly less likely to be fired even when they are incompetent (e.g., Leone and Liu, 2010).

Furthermore, family firms typically have one or more control-enhancing mechanism in place, for example, divergence between control rights and cash flow rights (Villalonga and Amit, 2006, 2009), dual class shares (Villalonga and Amit, 2009), and excess board representation (Anderson, Duru, and Reeb, 2009).

The above two sources of entrenchment give controlling families incentives to expropriate the firms at the expense of minority shareholders.

1.3.2 Other factors unique to family firms

While the feature of potentially less serious Type I but more serious Type II agency problem may not be exclusive to family firms (e.g, other firms with dominant controlling shareholders), there are other unique features that distinguish family firms from other nonfamily firms.

Although many nonfamily blockholders are also concerned about their reputation, family owners' great reputation concern is frequently highlighted as a distinguishing feature of family firms. Gilson (2007) points out that the inter-generational nature of decision making of family owners as well as their desire to pass a successful business to future generations naturally give them stronger incentive to take a long-term approach and to invest in reputation building. This in turn brings non-monetary benefits such as social status to the controlling families (Burkart, Panunzi, and Shleifer, 2003) and some hard-to-duplicate resources such as social capital, patent capital, and survivability capital (Sirmon and Hitt, 2003). Family owners thus have strong incentives to maintain a good reputation and competitive advantages associated with it, according to the resource-based view (e.g., Chua, Chrisman, and Steier, 2003).

Furthermore, the stewardship theory (e.g., Donaldson, 1990; Le Breton-Miller, Miller, and Lester, 2011) argues that family members are more likely than nonfamily shareholders/managers to have a feeling that they are part of the firms, which motivates them to act in the collective good of the firms' stakeholders. This is likely to lead natural alignment of controlling families' interest with that of other stakeholders (e.g., managers, minority shareholders, and creditors).

Overall, the agency theory argues that, compared to nonfamily firms, family firms are likely to face less serious Type I but potentially more serious Type II agency problems. The resource-based view and stewardship theory further support family owners' greater alignment with other stakeholders of the firms.

1.4 Key findings and contributions

1.4.1 Key findings

This study examines whether and how family control affects corporate governance in the Chinese market and the implications of family control on firm behaviour. The empirical evidence from this study suggests that firms controlled by families differ systematically from those controlled by nonfamily blockholders and those without controlling shareholders. However, not all family firms are the same when it comes to the impact of family control on corporate governance. The exact impact of family control is conditioned on some other factors. Some of the key findings are listed below.

First, firms with families as the controlling shareholder as a whole have better corporate governance practice than those with nonfamily controlling shareholder and those without controlling shareholder. Specifically, the evidence shows that family firms have less tunneling and a lower incidence of mandatory material restatements when compared to nonfamily firms. As a result, family firms on average enjoy a lower cost of debt than nonfamily firms. This finding is consistent with the notion that family firms have greater concerns for reputation than nonfamily firms (e.g., Burkart et al., 2003; Anderson et al., 2003), especially in an emerging market such as China where formal institution is relatively

weak and investors and creditors frequently have to rely on informal channels (e.g., personal reputation of a firm's founder/controlling shareholder) to make investment decisions (Allen et al., 2005).

Second, family owners are not a homogeneous group of controlling shareholders in their impact on agency relationship with creditors and minority shareholders. Although prior studies have found that the real impact of family firm depends on whether the founding family is actively involved in the management of the firm and if yes whether the founder or a descendant is the CEO (e.g., Anderson et al., 2003, 2009; Villalonga and Amit, 2006; Falenbrach, 2009), I investigate family firms' heterogeneity from a different perspective partly due to the fact that the majority of family firms in China are still controlled and actively managed by the founder(s) because the relatively short history of the development of private businesses in modern China. I find that the impact of family ownership/control is conditioned on the level of information transparency of the firms. Specifically, the lower cost of debt paid by family firms only applies to those family firms that have relatively transparent information. There is no significant difference in the cost of debt between family and nonfamily firms when corporate information is relatively opaque.

Third, although family firms' greater concern for reputation leads to their better corporate governance practice and consequently lower costs of debt, the consequences from reputation loss are more costly and serious for family firms than for nonfamily firms. Specifically, when family firms' reputation is impaired when they are forced to restate their annual financial report they face more negative and volatile stock returns, wider bid-ask spreads, and larger and longer-lasting loss in the information content of their stock prices. This finding suggests that while outside investors have certain level of trust in controlling families' incentives to

build and maintain a good reputation, they are quick to readjust their perception about the relative balance between controlling families' reputation concern and incentive of private benefits of control. In other words, outside investors' concern about the potentially more serious Type II agency problems will quickly become a dominant factor in their decision making.

1.4.2 Main contributions to the literature

The contributions of this study are threefold. First, this study contributes to the literature on the impact of political connection. Existing literature commonly treats political connection as a homogeneous factor when assessing its impact on corporate governance. I find that the impact of political connection on controlling families' tunneling behaviour depends on the nature and the hierarchy level of the connection. Specifically, while CPC/PPCC-type³ political connection helps to mitigate controlling families from tunneling activities; official-type political connection has no significant impact on family firms' tunneling behaviour. Furthermore, while CPC/PPCC political connections at both central and local levels reduce tunneling; the impact of the central-level political connection is significantly stronger than that at the local level. The finding that the impact of political connection is conditioned on the nature and hierarchy level helps to enhance our understanding of political connection which receives increasingly academic interest.

³ CPC stands for Chinese People's Congress. PPCC stands for Chinese People's Political Consultative Conference. These two organizations are the prominent political bodies in China's political system. Members of the CPC/PPCC enjoy a wide range of privileges.

Second, this study reveals that the impact of family ownership/control on agency conflicts (especially on the conflicts between controlling shareholders and creditors) and hence on the cost of debt is conditioned on corporate information opacity, a firm-level factor on which the controlling shareholder has great influence. Furthermore, the evidence shows that family firms with relatively transparent information can enjoy a lower cost of debt than nonfamily firm even when formal institutions are weak and when controlling families' control rights exceeds their cash-flow rights. My research thus adds important complementary contribution to the existing literature that finds that family ownership/control is beneficial only when investor protection is strong (Ellul et al., 2007) and when there is no divergence in control and cash-flow rights (Pindado et al., 2011). This finding is particularly important for family firms in many emerging markets where investor protection tends to be weak but control-enhancing mechanism, which often results in control-ownership divergence, is important in helping maintain effective control of the firms.

Third, this study makes an important contribution to the literature about family firms and reputation. I provide consistent evidence that family firms have a greater concern for reputation, which is in line with many prior studies (e.g., Burkart et al., 2003; Anderson et al., 2003; Ali et al., 2007; Chen et al., 2008; Falenbrach, 2009). More importantly, I find that once a good reputation is lost the consequences are significantly more serious and more costly for family firms than for nonfamily firms. The issue about the consequences to the loss of reputation for family firms, however, has so far been largely ignored by existing literature. This finding has important implication in that it demonstrates that family firms not only need to build a good reputation to alleviate investors' concern about private benefits of control, but also they need to maintain such a good reputation in order to avoid the costly consequences.

1.5 Structure of this thesis

This thesis is organized as follows. Chapter 2 examines if and how a CEO's political connection and founder-status affects the tunneling behavior of the firm. Chapter 3 investigates if the relation between family control and a firm's cost of debt is conditioned on the firm's information opacity. I further investigate how the impact of information opacity is affected by other factors. In Chapter 4 I explore the impact of family control on the incidence of firm being involved in material misstatements as well as investor reactions to mandatory restatements. Chapter 5 concludes the thesis.

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Chapter Two Tunneling in founding-family firms:

The role of political connection

2.1 Introduction

When larger shareholders or other insiders such as managers have the capability of controlling the firms they may have an incentive to extract private benefits as well. The practice of expropriating value from a firm is commonly referred to as “tunneling” (Johnson et al., 2000) or “self-dealing” (Djankov et al., 2008). Friedman et al. (2003) find that tunneling by entrepreneurs who control the firms is prevalent in countries with a weak legal system. The Chinese market has been criticized for its generally ineffective institutional system, weak investor protection, and lack of internal monitoring and external discipline mechanism. Tunneling behavior has frequently been detected in China’s publicly listed firms.

Some studies have tried to identify the specific factors, in addition to the common regulatory environment, that determine tunneling in China’s publicly listed firms. Li et al. (2004) document that concentrated ownership exacerbates the expropriation of assets by block shareholders. Chen et al. (2005) indicate that the state as the controlling shareholder facilitates tunneling. Tang et al. (2004) concede that institutional ownership is favorable for tunneling, while Gao and Kling (2008) argue that having the state and institution as principal shareholders is not necessary to facilitate tunneling. Jang et al. (2010) show that institutional investors avoid investing in firms that experience severe tunneling and this problem is much greater in non-state owned firms.

It is obvious that the existing literature on tunneling in China's listed firms provides inconsistent evidence. In this research, I do not intend to duplicate any of the evidence to align with some viewpoints because I conjecture that there is a 'hand' behind the factors identified by the abovementioned studies, which is the ultimate determinant of the tunneling behavior in China's listed firms. This 'hand' is the powerful 'Guan Xi' (relationship) in China – political connection. Political connection and its impact on firms' performance in various ways has been found in many countries (Friedman et al., 2003; Faccio et al., 2006), but it is more profound in China because political connection in China represents a complicated framework with three dimensions and permeates various enterprises.

First, political connection in China can be categorized into two types. One is an official-type political connection where a firm's manager is a current or former government official or military officer. The other is a CPC/PPCC-type political connection where a firm's manager is a current or former member of the Chinese People's Congress (CPC) or the Chinese People's Political Consultative Conference (PPCC).

Second, political connection in China is attributed to two levels of administrative hierarchy. One is that a firm's manager holds or held a political position in local (provincial or regional) government organizations. The other is that a firm's manager holds or held a political position in central (national) government organizations.

Finally, firm manager in China is a vague concept that in reality can be either a chief executive officer (CEO) or chairman of the board who plays different roles in the firm. Thus, a firm can be politically connected by either its CEO or chairman, or both. These differently politically connected managers represent a diverse form of interests of shareholders,

government organizations, and themselves and thus should have various incentives for tunneling.

If a manager is the establisher of the firm, the manager is entitled to be a founder manager and the firm is entitled to be a founder firm. The founder manager may be a block shareholder of the firm or an expert in the production, marketing, and management of the firm. Literature shows that founder managers and non-founder managers have different incentives in a firm's decision making (Anderson and Reeb, 2003; Anderson et al., 2009; Li and Srinivasan, 2011). It is expected that when founder managers are politically connected their incentives may have changed.

In this chapter I investigate the function of the 'hand' – political connection – in firm's tunneling behavior. The novelty of this research is that I am the first to classify political connections in China's publically listed firms into three dimensions: official-type and CPC/CPCC-type, local level and central level, CEO's connection and chairman's connection. Accordingly, I fill a gap by analyzing the motivation of managers with different political connections towards tunneling, intertwined with firms' ownership and managers' founder status.

I show that both political connection and founder status determines tunneling behavior and their impact varies in private firms and SOEs (state owned enterprises). Specifically, I find evidence that overall, manager's political connection reduces tunneling in private firms, whereas it facilitates tunneling in SOEs. There is less tunneling in both private firms and SOEs with founder-managers than in firms with non-founder-managers, but the tunneling between founder-manager firms and non-founder-manager firms is significantly greater in

private firms than in SOEs. When founder managers are politically connected they can still resist tunneling to some extent.

I find that for private firms, CPC/PPCC-type political connection significantly reduces firm tunneling, while official-type political connection has a positive but insignificant impact on tunneling. On the contrary, official-type political connection in SOEs significantly increases tunneling, while CPC/PPCC-type political connection has a negative but insignificant impact on tunneling. These results are consistent with the nature of these two types of political connections.

Finally, I show that a chairman's political connection has greater influences on tunneling than a CEO's political connection, in both private firms and SOEs. Political connections at the central level affect tunneling more than at the local level, for both official-type and CPC/PPCC-type political connections. These findings are also in line with my hypothetical analyses.

This study contributes to the literature in three ways. First, numerous studies show that managerial attributes affect firm risk-taking, investment policy, capital structure, and other corporate governance practices (May, 1995; Adams et al., 2005; Fahlenbrach, 2009; Faccio, 2010). I show that managerial attributes such as political connection and founder status, can also have a significant impact on tunneling, so this study adds to the existing literature by identifying a new channel through which managerial attributes affect firm valuation and performance.

Second, most existing studies of the Chinese market treat all political connections equally (Fan et al., 2007, Peng et al., 2011; Wu et al., 2012). I not only find evidence that political connection affects firm tunneling, I also show that the impact of political connection between types of political connection (official- or CPC/PPCC-type), hierarchy levels (local or central) and managers' positions (CEOs or chairmen) changes significantly. In my study I take the private or state controlling ownership as a firm's background, so to this extent, my study is also related to Wu et al. (2010), who find that the impact of political connection on firm performance, government subsidiary, and policy burden varies depending on the type of firm ownership.

Third, this study contributes to the literature on founder-managers in relation to political connections. The behavior of founder-managers and their impact on firm performance and valuation is attracting a great deal of academic interest (Anderson and Reeb, 2003; Adams et al., 2005; Villalonga and Amit, 2006; Anderson et al., 2009; Fahlenbrach, 2009). The Chinese stock market is still in its early stage of development and the number of listed firms is growing fast, which suggests there may be a higher percentage of firms with founder-managers than in Western markets,⁴ and yet there are only a few studies that directly examine the impact of founder-managers in the Chinese market (e.g., Wang and Wang 2011; Zhang et al., 2011). These two papers examine the relationship between founders and venture-capital performance, and the relationship between a CEO's founder status and turnover. I examine the impact of founder-managers from a different perspective, including political connection, which gives a better understanding of the impact of founder-managers in

⁴ Founders are managers in more than 21% of the sample firms, with a percentage of 33% for private firms and 15% for SOEs, respectively. The overall percentage of firms with founder-manager almost doubles that in the US, where only about 11% of firms have founder-managers.

China and provides an important complement to the literature that still largely focuses on Western markets.

The remainder of this chapter proceeds as follows. Section 2.2 provides a review of existing literature. Section 2.3 presents the institutional background in China and lays out my hypotheses. Section 2.4 describes the samples and data. Section 2.5 reports my empirical results. Section 2.6 carries out robustness tests and Section 2.7 concludes this chapter.

2.2 Literature review

2.2.1 Impact of ownership structure and firm characteristics on tunneling

A large number of studies examine the relationship between the structure of firm ownership and the nature and severity of tunneling by controlling shareholders. Berkman et al. (2009) and Jiang et al. (2010) find that the incidence of tunneling through loan guarantees and related lending is greater in private firms than in SOEs. Both Chen et al. (2009) and Cheung et al. (2010) find that firms controlled by the central government are more likely to be propped up, while firms controlled by local governments are more likely to be tunneled. La Porta et al. (1999), Claessens et al. (2000), and Faccio and Lang (2002) provide empirical evidence that firms belonging to business groups and being controlled by the ultimate owner through a chain of companies are more likely to be tunneled. The ultimate controlling shareholder exerts control over lower-level firms in the chain without necessarily having a majority of cash flow rights, which separates control rights from cash flow rights. This gives the controlling shareholder a strong incentive to extract private benefits and expropriate minority shareholders.

Researchers also examine other factors that may affect tunneling behavior. Cheung et al. (2006), Gao and Kling (2008), and Jiang et al. (2010) all find that tunneling is more severe in small firms relative to large firms. Gao and Kling (2008) find that the proportion of independent (outsider) directors is negatively associated with the severity of tunneling. Both Gao and Kling (2008) and Jiang et al. (2010) find that auditors do play a monitoring role with respect to reducing firm tunneling, but the latter point out that non-clean auditor opinions alone are not enough to deter tunneling. Finally, Jiang et al. (2010) find that good performance (ROA) in the previous year significantly reduce tunneling in the current year, whereas Cheung et al. (2006) show that the market-to-book ratio in the previous year is not negatively related to the likelihood of connected transactions; rather, it is positively associated with certain types of connected transactions that are of a tunneling nature.

2.2.2 Impact of political connection on firm performance and valuation

The literature finds both positive and negative impact of political connection on firm behavior, performance, and valuation. On the positive side, Leuz and Oberholzer-Gee (2006) find that politically connected firms have preferential access to loans from state owned banks. Li et al. (2006) find that politically connected firms gain favorable regulatory and legal treatment, while Boubakri et al. (2012) find that politically connected firms enjoy lower costs of equity capital than their non-connected peers because investors consider them to be less risky. Finally, Faccio et al. (2006) find that politically connected firms are significantly more likely to be bailed out by governments.

On the negative side, Cheung et al. (2005) find that political connection worsens the expropriation of minority shareholders by controlling shareholders and is detrimental to the

firm, while Fan et al. (2007) find there are more bureaucrats and fewer professionals on the boards of politically connected firms in China. Consequently, these firms underperform their non-connected peers in both the short term and long term. Faccio (2010) finds similar evidence using cross-country data.

2.2.3 Impact of founder-managers on firm behavior and performance

Research on the impact of founder and founder-managers generates extant literature with mixed empirical evidence. On one hand Anderson and Reeb (2003) and Villalonga and Amit (2006) find that firms with founder-managers have a higher market valuation and better performance than firms without founder-managers, while Fahlenbrach (2009) finds that firms with founder-CEOs invest more on R&D, have higher capital expenditure, and make more focused M&As, and Li and Srinivasan (2011) find that CEO pay-performance sensitivity is higher and the level of pay is lower when there is a founder-director on the board.

On the other hand Johnson et al. (1985) find that stock markets react positively when a company founder suddenly dies, suggesting that founder control has a negative effect. Leone and Liu (2010) find that compared to non-founder-CEOs, founder-CEOs are significantly less likely to be fired following an accounting irregularity, which indicates they are probably entrenched. Anderson et al. (2009) find that firms with both founders and heirs are significantly more opaque than firms with diffuse shareholders and founders and heirs tend to exploit this opacity to expropriate minority shareholders.

Firms with founder-managers account for about 11% of the largest public firms in the US (Anderson and Reeb, 2003) whereas firms with founder-managers make up more than 21% of

all sample firms (or 33% for private firms and 15% for SOEs). Yet the impact of founder-managers in the Chinese market attracts little academic interest. As one of few exceptions, Pi and Lowe (2010) study the patterns of CEO turnovers from 1997 to 2006 and discover that being a founder makes a CEO less likely to be replaced involuntarily. Wang and Wang (2011) find that the performance of a cross-border venture capital firm is strongly related to the founder's departure. These authors argue that the departure of the founder is an indication of the firm's transition to a modern corporation.

In summary, the literature on the Chinese market examines tunneling, political connection, and founder managers from various perspectives but in an isolated manner. This study differs from existing studies in that I integrate these three lines of research and investigate how manager's political connection and founder status can influence tunneling.

2.3 Institutional background and hypotheses

2.3.1 Institutional background

The Chinese stock market offers a natural setting for studying the tunneling activities of controlling shareholders for the following reasons. First, Chinese firms are commonly dominated by controlling shareholders with highly concentrated ownership. In a bid to recapitalize the ailing SOE sector, the Chinese government initiated the share issue privatization (SIP) reform with public share ownership in the early 1990s. In the preparation of IPOs, most selected SOEs went through a partial restructuring process where part of the assets and businesses of SOEs (often the best performing units) were either carved out or spun off to become publicly listed firms. The parent companies retained the majority of shares in the listed firms and also served as the controlling shareholders.

The data shows that the ultimate largest shareholder of a median SOE holds 40.87% of ownership. Deng et al. (2006) argue that such a parent-subsidary structure provides controlling shareholders with strong incentives and the capabilities of engaging in tunneling activities. In recent years an increasing number of privately controlled firms are listed on the market. Private firms have a relatively less concentrated ownership structure than SOE firms, but the largest shareholder, on average, still has 32.60% of all control rights, which is above the 30% criterion set by the CSRC in determining effective control.⁵

Second, the corporate governance system in China is still incomplete because China lacks a well-developed legal and investor protection system, which means minority shareholders have few channels through which to take action against controlling shareholders when their rights are jeopardized (McNeil, 2002; Allen et al., 2005). Although the China Securities Regulatory Committee (CSRC) is the official regulator of the stock markets in China, it lacks investigative and prosecuting power and sufficient resources to effectively enforce its own rules. External discipline is also weak in China. For example, takeovers and other forms of competition for corporate control (e.g., proxy contest) are far from common. The news media, which plays a significant role in improving corporate governance in Western markets (e.g., Miller 2006; Dyck et al., 2010), is ineffective in China due to tight government control of the news media sector.

Third, China is a politically dominated country where the Communist Party is the sole ruling party and other parties assist the Communist Party in improving its governance. Nominally, the Chinese People's Congress (CPC) is the legislative institution and the Chinese People's

⁵ "Notice about Issuing 'Guides to Constitutions of Listed Companies'", CSRC, December 16, 1997 (in Chinese, title is translated by the authors).

Political Consultative Conference (CPPCC) is the advisory body and the government is in charge of routine decision making and governance. In reality, the government retains the highest power while the other two organizations perform assisting roles. A prominent politician may hold a position in the government and/or have contemporary membership of the CPC or CPPCC.

The national system of administrative control is a pyramid structure where, under the administrative control of the central government, there are 31 provinces and municipalities (excluding Hong Kong, Taiwan and Macao). A province controls a number of regions and a region administers a number of counties, but the government and the CPC and CPPCC are embedded in each of these administrative hierarchies. Members of any of the three political at all levels enjoy special rights and personal benefits, either explicitly or implicitly.

To summarize this up, in transiting itself from a highly centralized planned economy to a modern market-oriented economy, China has been unable to synchronize other necessary and complementary reforms such as property rights, investor protection, and corporate laws. The concentrate ownership and salient institutional environment makes the Chinese stock market conducive to frequent and severe tunneling by large shareholders. Managers with different political connections represent diversiform interests of shareholders and government organizations, and thus may impel or prevent tunneling in firms.

2.3.2 Hypothesis development

2.3.2.1 Manager's political connections and firm tunneling

The majority of publically listed SOEs in China were mainly transformed from large state-owned enterprises that carved out or span off their profitable businesses and assets and restructured them into independent legal entities for listing. Thus, publicly listed SOEs have two notable features; one is that they have parent corporations, and the other is that the government retains the largest ownership stakes.

These parent corporations were reorganized with the remaining assets and labor resources in the original state owned enterprises after the publicly listed SOEs were carved out. Normally, the listed SOEs were affiliated to their parent corporations in both ownership and management teams' nomination, at least for a certain period after the SOEs were listed, but the assets and labor resources are of a lower quality than those in the listed SOEs because the high quality resources were allocated to the listed SOEs so they could qualify for listing and market competition. The parent corporations did not always receive fair compensation for carving out high quality resources in the period before the SOEs were listed, thus, they expected to receive valuable feedback from the listed SOEs in the future, and so felt that such action was reasonable.

The government retains the largest ownership stakes in the publicly listed SOEs, either directly or via their parent corporations, and holds the ultimate decision making rights in those firms⁶. These newly listed SOEs often assume the legacies of a planned economy because their primary goal is social stability and sustainable government power rather than

⁶ Of course in some cases, the government may choose to relinquish their stakes by selling it to private entities, resulting in "private control transfer". However, as Chen et al. (2008) find, there were only 62 such private control transfers during 1996 and 2000.

maximizing shareholder value. To fulfill these goals, listed SOEs may be required to transfer some assets and resources to support the government's social and economic policies.

To ensure the listed SOEs follow the requirements of both government and their parent corporations, both governments and parent corporations have strong incentives to appoint politically connected managers to run the listed SOEs, and these managers, being more concerned about their political future,⁷ are often willing to collude with government controlling shareholders and their parent corporations and engage in tunneling activities. Thus, I propose that:

H1a: Overall for SOEs, manager political connection is positively related to the severity of firm tunneling.

In contrast with SOEs, most private firms were listed because of their overall qualifications, with only a few being carved out from existing enterprises. Several listed private firms were formerly listed SOEs who relinquished their controlling stakes to private entities, which means the parent-subsidary structure is not as common here, and the associated incentive for the parent corporation to tunnel is less severe in listed private firms .

Despite the fact that the private sector has been the main engine of China's economic growth over the past two decades, private firms are still being discriminated and disadvantaged in many areas. Governments, either central or local, still maintain considerable control over the allocation of resources such as land, energy, and awarding of government projects and procurements, etc. Bank loans, a primary source of external financing, flow disproportionately

⁷ In a year 2000 survey cited by Chang and Wong (2004), Communist Party Committees and governments have remained involvement in all major corporate decisions in listed SOEs, particularly personnel decisions.

to SOEs despite their poor performance (Cull and Xu, 2000). Private firms often face many administrative obstacles in trying to obtain licenses and enter certain industries. Furthermore, private firms are frequently discriminated against when it comes to the enforcement of contracts with governments or SOEs.

To overcome this imperfect market mechanism and disadvantage in resource allocation, private entrepreneurs have strong motivation to enter politics or to establish political connections (Li et al., 2006). Unlike listed SOEs who must put up with various social burdens imposed by the government, private firms strive to obtain benefits through political connections, but do not need to bear the social burden, and as a rule, the government does not intervene in the operations of private firms through the political channel. Thus, I expect:

H1b: Overall for private firms, manager political connection is negatively related to the severity of firm tunneling.

2.3.2.2 Different types and levels of political connections and firm tunneling

Managers' political connections in China can be categorized into two broad types: Official-types and CPC/CPPCC-type, with each being at either the local level or central level. These two types of political connections are of very different natures and consequently have different impacts on firm behavior, including tunneling activities.

Official-type political connection is where a firm's managers are/were government or military officers. The government (including military) officers take charge of routine decision making and governance, such as resource allocations, fiscal grants, license issuance, industry

restructure, monetary policy, municipal projects, and so forth. Although overall private firms' political connection is hypothesized to be negatively related to tunneling in *H1b*, their official-type connected managers may have rent seeking motivations. While they directly bring many benefits to the firms such as industry access and bank loans through their political network with government authorities, they often require some rewards, so it may prove costly for firms to maintain these connections.

Similarly, official-type politically connected managers in SOEs may pursue personal rents for the benefits they bring into the firms and cost the firms' wealth to build their personal relationships. However, it is more important whether the government intends to expropriate the SOEs whenever it is necessary to achieve their social goals. Official-type connected managers in SOEs usually keep their administrative position ranking in line with the size and importance of the firm's business and their political future depends largely on how well they carry out the policies and instructions of the relevant local or central governments, the controlling shareholders of publicly listed SOEs.

Furthermore, the higher the level of official-type political connections, the greater the benefits these connections may bring to the firm, but in return, the larger rents required, and consequently more possible expropriation. Thus,

H2a: For both private firms and SOEs, manager's official-type political connection is positively related to tunneling. This positive relationship is stronger when the political connection is at the central level than at the local level.

CPC/PPCC-type political connection is where a firm's managers are/were members of the Chinese People's Congress (CPC) or the Chinese People's Political Consultative Conference

(CPPCC). In contrast with government officers, members of the CPC and CPPCC have two characteristics; first, many of them are not members of the communist party, particularly in the CPPCC, second, many of them have expertise in science, technology, industry, and business management. Although some of them are former veterans of government officers, they, except for a few who hold contemporary positions in government agencies, actually do not participate in routine and specific decision making as government officers do, and therefore managers connected to CPC/CPPCC are less likely to bring direct benefits to the firms so they have no bargaining power for personal rents and are unable to make effective commitments to the government.

Instead, because the CPC and CPPCC are legislative and advisory bodies, managers with connections to them are, to some extent, capable of preventing firms from adverse events such as unfair treatment from related parties in legal disputes, market shares, access to resources, and asset transactions. They are also able to raise unfair treatments in the CPC and CPPCC that the government should deal with, which also protects these firms from tunneling.

To show participation in governance from multiple parties, diverse nationalities and all classes of people, members of the CPC and CPPCC are positioned high in the political hierarchy. They are entitled to the same remuneration and welfare as government officers in the equivalent hierarchy, plus political privileges such as being immune from custody. Members of the CPC/CPPCC are expected to demonstrate integrity and impartiality as evidence that the government is being monitored effectively and because they enjoy social and personal benefits, competition for the limited membership of the CPC or CPPCC can be fierce. In fact, *ceteris paribus*, members who are guilty of misconduct may lose their reputation and further nomination.

To maintain their position and retain a good image, a manager who is a member of the CPC/PPCC is less likely to expropriate the firm's assets. Furthermore, relative to CPC/PPCC members at the local level, those at the central level attract greater scrutiny, either from the market, the media, or from within the organizations. Consequently, those at the central level have even stronger incentives not to engage in wrongdoing such as tunneling.

H2b: For both private firms and SOEs, manager's CPC/PPCC-type political connection is negatively related to tunneling. This negative relationship is stronger when the political connection is at the central level than at the local level.

2.3.2.3 Founder-managers and firm tunneling

Founder-managers are those who were either founders or main executives when a firm was first incorporated or spun-off for public listing. They were quite experienced with the firms' establishment, IPO process, and operations as publicly listed firms. Founder-managers at public SOEs were normally appointed by the state to lead these newly listed firms. In some cases they were instructed by governments to set up new businesses to solve the legacies of long term underperformance of SOEs and other social issues such as high unemployment and pressure on the government's fiscal budget. To encourage these managers to run the firms appropriately, governments often granted them a certain amount of equity ownership. The data shows that in SOEs, the average equity ownership is 0.35% for founder-managers and 0.07% for non-founder-managers, with the difference significant at the 1% level. The performance of these firms has been linked to the reputation of founder-managers, including their career concerns and personal benefits.

Most of the listed private firms in China were originally family firms established by private entrepreneurs who were most likely to be the largest equity owner.⁸ The founders often assume the position of chairman, CEO, or both, and still hold a large ownership stake, even after the firms were publicly listed. Because founder-managers of private firms invest most of their wealth into the firms, they have a stronger motivation in their firms' long term survival and continuous development, and are extremely desirous of passing profitable firms and sustainable assets to their descendants.

Founder managers in both SOEs and private firms are most likely to be more painstaking than non-founder-managers, indeed the relation between personal benefits and firm performance is also stronger for founder-managers than non-founder-managers. Founder-managers usually regard the firms as their life success and thus try hard to avoid having the firms fail. This motivates them to take a longer term approach (Fahlenbrach, 2009) and restrain the firms from tunneling.

Founder-managers can also be politically connected, but as I point out above, founder-managers often have high monetary interests which are closely linked to firm performance. The motivation for a sole founder-manager not to tunnel is stronger than the motivation to tunnel, whereas a sole politically connected manager may not be so motivated because of the interest and efforts of trade-off, i.e., the interest obtained from one unit effort is larger from a founder's perspective than from a politically connected manager's perspective, and even if a politically connected manager engages in tunneling activities, his incentive to tunnel is likely to be reduced if he is also a founder-manager.

⁸ I find that, in sample firms, the ownership of the largest shareholder (which is often the founder) is 28.49% for founder-manager firms and 21.19% for non-founder-manager firms. The difference is significant at the 1% level.

H3: For both private firms and SOEs, firms with founder-managers have less tunneling than firms without founder-managers, regardless of whether the managers are politically connected or not.

2.3.2.4 Different impact of the Chairman's and COE's political connection on tunneling

So far in this chapter I have made no distinction between either the chairman's or the CEO's political connections with respect to their impact on tunnelling, and while such a distinction may be irrelevant for firms in Western countries where the chairman is usually not involved in the day-to-day running of the firm (except for executive chairmen), the situation in Chinese firms is quite different. Existing literature on the Chinese stock market has different opinions as to who the top executive in a Chinese firm actually is; for example, Fan et al. (2007) regard the CEO as the top executive, whereas Firth et al. (2006) consider the chairman to be the top executive because they argue that the chairman is often involved in day-to-day decision making in Chinese firms. Meanwhile Kato and Long (2006) also consider the Chairman to be the top executive insofar that the chairman is paid a salary by the firm. Furthermore, existing literature pays almost no attention to the possible different impact that a chairman and CEO has on firm behavior.⁹

⁹ One notable exception is Wu et al. (2012). These authors find that politically connected CEOs play a more important role than politically connected chairmen in the operations in local SEOs, and politically connected chairmen have greater influence than connected COEs in obtaining government subsidies in private firms. But other than these, there is no distinct difference between chairmen and CEOs on firm value, government subsidies and policy burden.

In China, the chairman is the legal representative of a firm and in most cases is appointed by the controlling shareholder. Given the highly concentrated ownership structure, the chairman is more likely to be powerful and exert enormous influence on the daily operations of the firm. Kato and Long (2006) argue that even when the chairman and the CEO are both responsible for daily operations of the firm, the chairman is likely to be more powerful than the CEO. The relative power of the chairman and the CEO can be proven by the following two facts; first, founders in private firms, who are often the controlling shareholders, are more likely to take the position of chairman rather than CEO,¹⁰ second, it is widely regarded as a promotion in SOEs when the CEO is appointed to become the chairman, and a demotion if the chairman loses his chairmanship and becomes the CEO of the firm. Thus, I expect that,

H4: For both private firms and SOEs, the chairman's political connection is more influential than the CEO's political connection on tunneling behavior.

2.4 Sample and data

2.4.1 Sample selection and data source

My initial sample consists of all non-financial A-share issuing firms listed on either the Shanghai Stock Exchange or the Shenzhen Stock Exchange between 2004 and 2010. I chose 2004 as the starting year because membership of the Chinese Communist Party was not officially open to private entrepreneurs until late 2002, when the 16th National Congress of the Communist Party amended its Party Constitution (Xinhua News Agency Nov. 18 2002). The Chinese Communist Party was officially opened to private entrepreneurs to provide more

¹⁰ I find that, of the 1130 private firms with founder-managers, 1108 founders take the position of the chairman and 502 founders take the position of the CEO, with some founders taking both positions.

opportunity for private entrepreneurs to be selected as government officers. This also signaled that the CPC and CPPCC would accept more private entrepreneurs as members. The procedure from submission of application to official assessment and ratification normally takes a couple of years, although it may vary among different applicants.

In the sample I exclude firms where the ultimate largest shareholder is a foreign entity, and also firms cross-listed overseas (including Hong Kong) because foreign accounting rules may affect the treatment of “other receivables” and some other accounting items used in this study.¹¹ I then delete the observations of the first year of listing because Chinese firms commonly engage in pre-IPO earnings management that results in unusually high levels of various forms of related party transactions and fund transfers in the first year of listing. After eliminating observation sets with missing data, the final sample consists of 1591 firms and 9499 firm-year observation sets, which is larger than those in most previous studies on tunneling in the Chinese stock markets.

I obtain accounting and financial data from the China Stock Market and Accounting Research (CSMAR) database, which is one of the most widely used databases for research on the Chinese stock markets. I hand collect the information on manager political connection by checking the “Directors and Senior Executives’ Profile” in annual reports. However, annual reports rarely mention whether or not a manager is a founder, so I search the internet through Google, Baidu, and Wikipedia. I consider a manager to be a founder-manager if any one of those sources explicitly mentions so and no other source indicates otherwise.

¹¹ My sample includes firms that also issue B-shares (in addition to A-shares), since these firms must abide Chinese laws. I, however, exclude B-shares in this study.

2.4.2 Measurement of variables

2.4.2.1 Tunneling

Three approaches have generally been used to measure tunneling in China: related party transactions (Cheung et al., 2006), loan guarantees to related parties (Berkman et al., 2009), and fund occupations (i.e., inter-corporate loans in Jiang et al., 2010). I do not use the first two measurements because: (1) the issuance of any new loan guarantee was banned by the CSRC in June 2000; and (2) the approach used by Cheung et al. (2006) requires an a priori subjective judgment on whether a certain RPT is beneficial, expropriating, or neutral to the listed firm. The limitation of such a subjective judgment is evident. For example, Cheung et al. (2006) consider all asset sales by a listed firm to related parties to be expropriating; but it's obvious that the nature of such transactions depends on whether the prices paid are above, below, or the same as in arms-length deals. Therefore, I follow Jiang et al. (2010) and use fund occupation by controlling shareholders as a proxy for tunneling, which is the ratio of the total amount of "other receivables" in the balance sheet to total assets.

"Other receivables" is an accounting item that includes receivables that are not part of ordinary business transactions. These receivables are essentially interest free loans made by listed firms to other parties where a large proportion of these funds are occupied for a long period of time, and in many cases are never paid back to the listed firms (Jiang et al., 2010). The advantage of this measurement is that, unlike the approach used by Cheung et al. (2006), it is relatively easy to tell who the beneficiary of this particular form of tunneling is.

In addition, fund occupation through the "other receivables" account by controlling shareholders and their affiliates is such a widespread tunneling practice in China that the

CSRC has issued several rules or decrees aimed specifically at tackling this issue. However, this practice remains prevalent because the rules are not enforced. For my sample firms the balance of “other receivables”, on average, accounted for 6.00% of total assets (or 138 million RMB) in a private firm and 3.90% of total assets (or 227 million RMB) in a state-owned enterprise (SOE), which represents a heavy cost to the listed firms. Moreover these figures are almost certainly underestimated since many of the affiliates cannot easily be identified with controlling shareholders.

2.4.2.2 Manager political connection

Faccio (2006) defines a firm to be politically connected if one of the firm’s large shareholders or top officers is a member of parliament, a minister, or the head of state, or closely related to a top official. However, in the Chinese situation Chen et al. (2011), Fan et al. (2007) and others extend Faccio (2006)’s original definition by considering China’s specific circumstances and define a Chinese firm to be politically connected if a manager is a current or former (1) government official; (2) military officer; (3) member of the Chinese People’s Congress (CPC); and (4) member of the Chinese People’s Political Consultative Conference (CPPCC). Therefore I follow Chen et al. (2011) definition to identify politically connected managers.

To examine the impact of these types of political connections on firm’s tunneling behavior I categorize managers’ political connections into two broad types, namely official-type connection (if a manager has the above (1) or (2) connection), and CPC/CPPCC-type connection (if a manager has the above (3) or (4) connection). To test the impact of political connections at different levels, I further classify all political connections into central level

connections and local level connections (province or lower). Thus, there are up to six different types of manager political connections in the formal tests.

2.4.2.3 Founder-manager

To remain consistent with Anderson and Reeb (2003) and Adams et al. (2005), I consider a manager to be a founder-manager if she/he was a founder or a main executive when the firm was first incorporated, or when it was spun-off.

2.4.2.4 Control variables

To control for other factors that may affect tunnelling, I include the following control variables in multivariate regressions: a dummy variable indicating that the firm has completed the non-tradable share reform (*Reform*), the difference between the controlling shareholder's control rights and cash flow rights (*Wedge*), equity ownership by managers (*Mg shares*), the size of the firm (*Firm size*), return on assets (*ROA*), leverage (*Leverage*), sales growth (*Growth*), and percentage of independent directors (*Independence*). The theoretical and empirical evidence for the impact of these variables on tunneling is relatively well known so I only provide a brief discussion.

Before the non-tradable share (NTS) reform started in the middle of 2005, a high proportion of listed firms' outstanding shares were mainly held by blockholders, including controlling shareholders, and were not tradable in the stock exchanges. Thus, controlling shareholders were not too concerned about negative market reactions to their tunneling behavior, but after NTS reform the controlling shareholders would have less incentive to tunnel listed firms

because they must now balance their private benefits from tunneling with any loss from negative market reactions. Therefore, I expect a negative impact of *Reform* on tunneling.

Controlling shareholders have more incentive to extract private benefits from the firm if there is a divergence between their control rights and cash flow rights, while managers with a large equity ownership are more concerned about firm performance and therefore are less likely to engage in tunneling, *ceteris paribus*. Large firms are subjected to more public scrutiny and are more likely to be located in developed areas with stronger institutional development. Thus, I expect a negative association between firm size and tunneling. Tunneling is expected to have an adverse impact on firm performance, so controlling shareholders must consider the trade-off between private benefits from tunneling and returns from future growth. The potential cost of tunneling for controlling shareholders is higher for firms with higher ROA and sales growth so I expect that the impact of both ROA and sales growth on tunneling would be negative.

While I expect a negative association between board independence and tunneling, the relationship between leverage and tunneling is not as clear cut as it may appear. Friedman et al. (2003) argue that debt represents a commitment by controlling shareholders to prop up the firm when a moderately adverse shock occurs, but high leverage may lead controlling shareholders to abandon or loot the firm in the case of a serious shock. The primary source of debt financing in China is bank loans and state owned banks are the dominant players in the banking sector. A high leverage could indicate government support (through state owned banks), making a firm less concerned about negative market reactions to tunneling.

I also include industry and year dummy variables in all the regression analyses. Industry dummy variables are based on the one-digit industry codes published by the China Securities Regulatory Commission (CSRC), which classifies all listed firms into 13 broad industries (12 industries if the financial service industry is excluded). Detailed descriptions of main variables used in this chapter are reported in Table 2.1. To minimize the influence of extreme values, all continuous variables are winsorized at the 1% and 99% level.

2.4.3 Descriptive statistics

Panel A in Table 2.2 reports the distribution of firms with political connections and firms with founder-managers by year, for private firms and for SOEs, respectively. The data shows that a total of 9499 firms (or firm-year observations) consists of 3416 (or 35.96%) firms where a private entity is the ultimate largest shareholder, and 6083 (or 64.04%) firms where the state or a government agency is the ultimate largest shareholder. The proportion of private firms in my sample is higher than in many previous studies (e.g., Chen et al., 2009; Peng et al., 2011), probably because my sample covers a more recent period and private firms accounted for a larger proportion of all newly listed firms during this period.

Across the whole sample period, about 36.50% of private firms and 35.23% of SOEs are politically connected. On a year-by-year basis the percentage of politically connected firms is relatively stable; this is why I am unable to test how changes in political connections affect firm tunnelling activities.

Regarding the percentage of firms with founder-managers, it is higher in private firms (33.08%) than in SOEs (14.68%). Also, the percentage of founder-manager firms is much

higher than in the US (about 11%, see Anderson and Reeb, 2003 and Adams et al., 2005). This significant difference clearly reflects the fact that the Chinese stock markets are in their early stage of development. The data also shows that the percentage of private firms with founder-managers is rising steadily while the percentage of SOEs with founder-manager is declining. There are two possible explanations for this, the increasing number of newly listed private firms (which often have a founder-manager) and/or the promotion or retirement of founder-managers in SOEs.

Panel B in Table 2.2 presents the descriptive statistics of tunneling measured by “other receivables”, a proxy for fund occupation by controlling shareholders. The data shows that almost all sample firms report “other receivables” in their balance sheets, with the balance representing 6.00% of total assets (or 138 million RMB) for privately controlled firms and 3.90% of total assets (or 227 million RMB) for SOEs. These occupied funds are charged very low interest, even zero, and in many cases they are never paid back, which could have significant adverse economic consequences for the listed firms (Jiang et al., 2010).

Table 2.1 Descriptions of main variables used in the analyses

Variable	Description
Dependent variables	
Tunneling	Total amount of “other receivables” / total assets (Jiang et al., 2010)
Key independent variables	
Political connection	Dummy variable that equals 1 if either (or both) the Chairman or the CEO is a current or former government official, military officer or member of the Chinese People’s Congress (CPC) or the Chinese People’s Political Consultative Conference (CPPCC); zero otherwise
Official PC	Dummy variable that equals 1 if either (or both) the Chairman or the CEO is a current or former government official or military officer and neither of them is a member of the CPC or CPPCC; zero otherwise
CPC/CPPCC	Dummy variable that equals 1 if either (or both) the Chairman or the CEO is a current or former member of the CPC or CPPCC and neither of them is a current or former government official or military officer; zero otherwise
Dual PC	Dummy variable that equals 1 if a firm has both official-type PC and CPC/CPPCC-type PC; zero otherwise
Local PC	Dummy variable that equals 1 if a firm has only local level (provincial or lower) political connection
Central PC	Dummy variable that equals 1 if a firm has central level political connection
Chair PC	Dummy variable that equals 1 if the chairman has political connection; zero otherwise
CEO PC	Dummy variable that equals 1 if the CEO has political connection; zero otherwise
Founder	Dummy variable that equals 1 if the Chairman or the CEO is a founder or a main executive when the firm was first incorporated (including when spun-off); zero otherwise
Control variables	
Reform	Dummy variable that equals 1 if the firm has completed the non-tradable share reform at the end of the year; zero otherwise
Wedge	The difference between the ultimate largest shareholder’s control rights and cash flow rights.
Mg shares	Number of shares held by top executives / total number of shares outstanding
Firm size	Natural logarithm of total assets
ROA	Net income / total assets
Leverage	Total liabilities / total assets
Growth	(Total sales this year – total sales last year) / total sales last year
Board independence (Independence)	Number of independent directors / total number of directors
Duality	Dummy variable that equals 1 if the Chair and the CEO is the same person; zero otherwise
Instrumental variables	
Unemployment	Registered unemployment rate in the province in which a firm is headquartered
Log GDP	Natural logarithm of GDP per capita in the province in which a firm is headquartered
Savings ratio	Total domestic deposits in financial institutions / total GDP in the province in which a firm is headquartered

Table 2.2 Descriptive statistics of manager political connection, founder status, and overall level of tunneling

This table presents the descriptive statistics of manager political connection and founder-managers for private firms and SOEs. Panel A reports sample breakdown across years. Panel B reports the overall level of tunneling across years. The definitions of *Political connection*, *Founder*, and *Tunneling* are reported in Table 1. Proportion is calculated by dividing the number of firms with political connection or founder-manager by the total number of firms in that category. For example, there are 339 private firms in 2004 of which 119 have political connections. Therefore, the proportion of political connection is $119/339=35.10\%$.

Panel A: The proportion of political connection and founder-manager firms by year							Panel B: Tunneling by year					
Year	Private Firms			State-owned enterprises (SOEs)			Private firms			State-owned enterprises (SOEs)		
	# of firms	Political connection (proportion)	Founder (proportion)	# of firms	Political connection (proportion)	Founder (proportion)	# of firms reporting tunneling	Mean	Median	# of firms reporting tunneling	Mean	Median
2004	339	119 (35.10%)	84 (24.78%)	842	305 (36.22%)	133 (15.80%)	339	0.112	0.047	842	0.065	0.029
2005	400	140 (35.00%)	113 (28.25%)	878	310 (35.31%)	143 (16.29%)	400	0.108	0.039	878	0.062	0.026
2006	429	152 (35.43%)	121 (28.21%)	850	296 (34.82%)	131 (15.41%)	429	0.101	0.033	850	0.055	0.020
2007	474	172 (36.29%)	141 (29.75%)	849	305 (35.92%)	130 (15.31%)	474	0.052	0.021	848	0.030	0.013
2008	538	192 (35.69%)	193 (35.87%)	884	319 (36.09%)	131 (14.82%)	536	0.036	0.015	881	0.025	0.011
2009	596	228 (38.26%)	225 (37.75%)	886	310 (34.99%)	120 (13.54%)	596	0.030	0.012	885	0.020	0.009
2010	640	244 (38.13%)	253 (39.53%)	894	298 (33.33%)	105 (11.74%)	639	0.025	0.011	894	0.019	0.008
Total	3416	1247 (36.50%)	1130 (33.08%)	6083	2143 (35.23%)	893 (14.68%)	3413	0.060	0.019	6078	0.039	0.014

Panel B also reveals three clear patterns. First, on average, private firms report more tunneling than SOEs, either on an aggregated base or on a year-by-year base. Second, during the sample period, the severity of tunneling is on the decline, suggesting that enhancement in laws and regulations have had some effects in reducing tunneling. Nonetheless, at the end of 2010, “other receivables” still represents 2.50% of total assets in private firms and 1.90% in SOEs. Third, the difference in tunneling between private firms and SOEs has also narrowed. For example, at the end of 2004, “other receivables” represented 11.20% of total assets for private firms and 6.50% for local SOEs, with a difference of 4.70%. At the end of 2010 this difference narrows to 0.60%, which may suggest that relevant laws and regulations have had a larger effect on private firms than on SOEs.

Table 2.3 provides descriptive statistics that are broken down by manager political connection and founder status. Private firms without politically connected managers report tunneling that represents 7.00% of total assets, which is significantly higher than the 4.10% reported by those private firms with connected managers. In contrast, SOEs with politically connected managers report significantly more tunneling than those SOEs without connected managers (4.40% vs. 3.70%, significant at the 1% level). Private firms without founder-managers report tunneling that represents 7.40% of total assets, which almost triples the reported tunneling (2.50%) for those with founder-managers. SOEs with founder-managers also report significantly less tunneling than those without founder-managers, but the difference is smaller than in private firms. The above statistics provide initial evidences that coincide with my hypotheses 1a, 1b and 3.

A manager is more likely to be politically connected if they are a founder-manager, which can be observed in both private firms and SOEs. For both private firms and SOEs, the

divergence between the controlling shareholder's control rights and cash flow rights is smaller if a firm has a politically connected or founder-manager. These firms are also significantly larger. Firms with founder-managers have significantly lower leverage than those without, which may imply they take less risk. What is also notable is that private firms with politically connected managers have a leverage ratio of 0.52, which is only slightly higher than half the leverage ratio for those without connected managers. This is certainly worth further investigation. There is no significant difference in performance (either ROA or sales growth) between firms with/without politically connected managers or founder-managers. One exception is that SOEs with founder-managers have marginally higher ROA than SOEs without founder-managers, which may imply that the former are more concerned about firm performance than the latter. Finally, private firms with founder-managers have a significantly higher percentage of independent directors, which indicates that the internal corporate governance in these firms is better.

To summarize, firms with and without politically connected managers or founder-managers differ significantly in their tunneling behavior. They also differ significantly in size and capital structure. I next formally examine how these factors affect firm tunneling behavior.

Table 2.3 Univariate analyses on mean differences for main variables

Variables include *Tunneling*, *Political connection*, *Founder*, and other firm characteristics. The definitions of these variables are reported in Table 1. *P*-values using the two-tailed *t*-test (Mann-Whitney-Wilcoxon test) are reported in parentheses below the differences in means. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Private firms						State-owned enterprises (SOEs)					
	PC firms	Non-PC firms	Difference in means	Founder firms	Non-founder firms	Difference in means	PC firms	Non-PC firms	Difference in means	Founder firms	Non-founder firms	Difference in means
	(1)	(2)	(1)–(2)	(3)	(4)	(3)–(4)	(5)	(6)	(5)–(6)	(7)	(8)	(7)–(8)
Tunneling	0.041	0.070	-0.029*** (0.000)	0.025	0.074	-0.049*** (0.000)	0.044	0.037	0.007*** (0.001)	0.031	0.041	-0.010*** (0.000)
Political Connection				0.516	0.302	0.214*** (0.00)				0.456	0.335	0.121*** (0.000)
Founder	0.416	0.224	0.192*** (0.000)				0.190	0.123	0.067*** (0.000)			
Reform	0.803	0.757	0.046*** (0.001)	0.869	0.734	0.135*** (0.000)	0.706	0.712	-0.006 (0.322)	0.700	0.711	-0.011 (0.246)
Wedge	0.086	0.092	-0.006** (0.032)	0.073	0.097	-0.024*** (0.000)	0.030	0.045	-0.015*** (0.000)	0.032	0.041	-0.009*** (0.000)
Mg shares	0.034	0.027	0.007** (0.018)	0.079	0.009	0.070*** (0.000)	<0.001	0.001	-0.001*** (0.006)	0.003	0.001	0.002*** (0.000)
Total assets (billion)	3.230	1.780	1.450*** (0.000)	2.940	2.050	0.890*** (0.000)	6.830	5.260	1.570*** (0.002)	6.450	5.710	0.740* (0.076)
ROA	0.075	0.049	0.026 (0.760)	0.102	0.044	0.058 (0.263)	0.021	0.088	-0.067 (0.106)	0.095	0.059	0.036* (0.091)
Leverage	0.520	1.024	-0.504*** (0.000)	0.440	1.006	-0.566*** (0.000)	0.538	0.541	-0.003 (0.350)	0.500	0.547	-0.047*** (0.000)
Growth	0.270	0.238	0.032* (0.100)	0.255	0.247	0.008 (0.368)	0.234	0.232	0.002 (0.452)	0.228	0.233	-0.005 (0.371)
Independence	0.363	0.363	0.000 (0.568)	0.368	0.361	0.007*** (0.002)	0.353	0.353	0.000 (0.593)	0.353	0.353	0.000 (0.768)
No. of firms	1247	2169	—	1003	2413	—	2143	3940	—	893	5190	—

2.5 Multivariate results

2.5.1 Impact of political connection on tunneling

Table 2.4 reports the results of OLS regressions of tunneling on manager political connection. I run two sets of regressions, one for private firms, reported in columns (1) to (4), and the other for SOEs, reported in columns (5) to (8). In each of the regressions, the dependent variable is *Tunneling* measured by the ratio of “other receivables” to total assets. I use four specifications for each set of regressions. First, I only control *Reform* in columns (1) and (5), without considering other control variables. I then add control for *wedge* – the divergence between controlling shareholders’ control rights and cash flow rights, as well as year and industry effects, in columns (2) and (6). I further include manager equity ownership and firm leverage in columns (3) and (7). Existing literature indicates there is a strong association between firm tunneling and these three factors. Finally, I include more other control variables in columns (4) and (8). The *p*-values reported in parentheses are based on standard errors adjusted for heteroskedasticity using White (1980).

Throughout columns (1) to (4), the coefficient of *Political connection* is negative and significant at least at the 5% level. The results indicate that private firms with politically connected managers have significantly less tunneling than those without connected managers, which confirms the univariate results reported in Table 2.3. In contrast, the coefficient of *Political connection* in columns (5) to (8) is positive and significant at the 1% level, which indicates that SOEs with politically connected managers have significantly more tunneling than those SOEs without connected managers. These results are also consistent with the univariate results in Table 2.3.

Table 2.4 Impact of manager political connection on firm tunneling behavior

This table presents OLS regression results of the impacts of manager political connection on firm tunneling behavior. The dependent variable is *Tunneling* and the key independent variable is *Political connection*. Columns (1) to (4) report the results for private firms and columns (5) to (8) report the results for SOEs. The definitions of all variables are reported in Table 1. *P*-values based on standard errors corrected for heteroskedasticity using White (1980) are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Dependent variable: Tunneling							
	Private firms				State-owned enterprises (SOEs)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Constant	0.141*** (0.000)	0.120*** (0.000)	0.121*** (0.000)	0.643*** (0.000)	0.072*** (0.000)	0.073*** (0.000)	0.050*** (0.000)	0.304*** (0.000)
Political connection	-0.025*** (0.000)	-0.020*** (0.000)	-0.019*** (0.000)	-0.006** (0.050)	0.007*** (0.001)	0.007*** (0.001)	0.007*** (0.001)	0.008*** (0.000)
Reform	-0.094*** (0.000)	-0.107*** (0.000)	-0.098*** (0.000)	-0.082*** (0.000)	-0.049*** (0.000)	-0.081*** (0.000)	-0.070*** (0.000)	-0.055*** (0.000)
Wedge		0.042** (0.022)	0.063*** (0.001)	0.021* (0.094)		0.036*** (0.000)	0.034*** (0.000)	0.026*** (0.006)
Mg shares			-0.084*** (0.000)	-0.100*** (0.000)			-0.004 (0.929)	-0.024 (0.538)
Firm size				-0.025*** (0.000)				-0.012*** (0.000)
ROA				-0.001*** (0.000)				-0.006*** (0.009)
Leverage			0.003** (0.049)	0.003** (0.025)			0.052*** (0.000)	0.057*** (0.000)
Growth				-0.006 (0.104)				-0.009*** (0.000)
Independence				-0.004 (0.907)				0.009 (0.598)
Year effect	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Industry effect	No	Yes	Yes	Yes	No	Yes	Yes	Yes
No. of Obs.	3416	3416	3416	3416	6083	6083	6083	6083
R-squared	0.139	0.190	0.208	0.269	0.090	0.143	0.199	0.251
F-value	124.73***	19.01***	21.25***	20.27***	160.24***	27.91***	27.43***	26.77***

Overall, the results in Table 2.4 confirm *H1a* and *H1b*. That is, manager political connection is negatively related to firm tunneling in private firms, but is positively related to tunneling in SOEs. Private firms seek political connections to protect themselves from disadvantage in the competition for resources while they have less responsibility to fulfill social goals. Manager political connection in SOEs is a tool for their parent corporations to obtain feedback and for the government to fulfill social goals.

The coefficients of control variables are generally in line with my expectations. Tunneling by controlling shareholders has been significantly reduced since the completion of NTS reform, indicating a better alignment between controlling shareholders and minority shareholders after the NTS reform. Large firms (*Firm size*), better performing (ROA), high growth (*Growth*) and manager equity ownership (Mg shares) have less tunneling. However, firm leverage (*Leverage*) is positively and significantly related to tunneling. This result contradicts the prediction by Friedman et al. (2003), who argue that debt may act as a commitment by controlling shareholders to prop up the firms when needed. Consistent with some existing studies (Claessens et al., 2000; Faccio and Lang 2002), I find a strong positive link between controlling shareholder's excess control rights and tunneling.

2.5.2 Impact of the type and level of political connection on tunneling

So far I classify political connection into official-type and CPC/PPCC-type, at either local or central hierarchy. In fact a firm's political connection can be both official-type and CPC/PPCC-type (Dual-type), because a CEO may be official-type connected and a chairman may be CPC/PPCC-type connected in a firm, or vice versa. I expect that firms with managers who have different type of political connections have different incentive for

tunneling. The test results are reported in Table 2.5. As in Table 2.4, I run a set of regressions for private firms and SOEs, respectively.

I first analyze the results for private firms. Column (1) of Table 2.5 contains only private firms with managers who have official-type political connection and private firms without politically connected managers. The coefficient of either *Local official PC* or *Central official PC* is positive but insignificant, which indicates that official-type political connection has no significant impact on tunneling in private firms. Column (2) contains only private firms with managers who have CPC/PPCC-type political connection and private firms without politically connected managers. Both of the coefficients of *Local CPC/PPCC* and *Central CPC/PPCC* are negative and significant, which indicates that this type of political connection significantly reduces firm tunneling. The coefficient of *Central CPC/PPCC* is much larger than *Local CPC/PPCC* (-0.012 vs. -0.006), which suggests that the higher the level of CPC/PPCC-type connections, the greater the impact it has in reducing firm tunneling.

Column (3) of Table 2.5 contains only private firms with Dual-type political connections and private firms without political connected managers. Both of the coefficients of *Local dual PC* and *Central dual PC* are insignificant. This is not surprising since official-type and CPC/PPCC-type connections have an opposite impact on tunneling and offset each other. However, both of these two coefficients are negative, the same sign as those of *Local CPC/PPCC* and *Central CPC/PPCC*, which suggests that in private firms, CPC/PPCC-type political connections have a greater impact on tunneling than official-type political connections. This can be confirmed by the results in Table 2.4, where overall manager political connection has a significantly negative impact on tunneling in private firms. Column

(4) contains all the private firms. The sign and significance of the coefficient of each of these six types of political connections generally confirms those in columns (1) to (3), with the exception of *Central dual PC*, which becomes significant in the full sub-sample regression.

Columns (5) to (8) report the results for SOEs. The results show that manager official-type political connection significantly increases tunnelling, and this positive impact is significantly greater if the connection is at the central level than at the local level (0.024 vs. 0.009 in column (5) and 0.023 vs. 0.008 in column (8), all significant at the 1% level). The coefficient of *Central CPC/PPCC* is -0.004 and is significant at the 5% level, which indicates that manager CPC/PPCC-type political connection at the central level significantly reduces tunnelling at SOEs, while CPC/PPCC-type political connection at the local level has a negative but insignificant impact on tunnelling in SOEs.

Overall, the regression results in Table 2.5 partially confirm *H2a* and *H2b*. Manager official-type political connection has a positive impact on tunneling, but this positive impact is significant only in SOEs. Manager CPC/PPCC-type political connection has a negative impact on tunneling, but this negative impact is more significant in private firms than in SOEs. With both types of political connections, those at the central level are more influential than those at the local level, with respect to their impact on firm tunneling. Managers with official-type political connection have an incentive to seek rent because they can bring benefit to the firms. They also expect political promotion by satisfying governmental requirements. Managers with CPC/PPCC-type political connection cannot bring direct benefits to the firms, but they have the incentive and ability to protect the firm from adverse events such as tunnelling. The incentive for managers with a central level of connection is higher than for managers with local levels of connection.

Table 2.5 Impact of manager political connection type and connection level on firm tunneling behavior

This table presents OLS regression results of the impacts of different types of manager political connections on firm tunneling behavior. The dependent variable is *Tunneling* and the key independent variables are three types of political connections, namely *Official PC*, *CPC/CPCC*, and *Both PC*. Columns (1) to (4) report the results for private firms and columns (5) to (8) report the results for SOEs. Columns (1) and (5) contain only those firms with managers who have official-type political connection and firms without connected managers. Columns (2) and (6) contain only those firms with managers who have CPC/CPCC-type political connection and firms without connected managers. Columns (3) and (7) contain only those firms with managers who have both official-type and CPC/CPCC-type political connection and firms without connected managers. Columns (4) and (8) contain all private firms and all SOEs, respectively. The definitions of all variables are reported in Table 1. *P*-values based on standard errors corrected for heteroskedasticity using White (1980) are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Dependent variable: Tunneling							
	Private firms				State-owned enterprises (SOEs)			
	Official PC firms vs. Non-PC firms	CPC/CPCC firms vs. Non-PC firms	Dual PC firms vs. Non-PC firms	All private firms	Official PC firms vs. Non-PC firms	CPC/CPCC firms vs. Non-PC firms	Dual PC firms vs. Non-PC firms	All SOEs
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Constant	0.745*** (0.000)	0.617*** (0.000)	0.743*** (0.000)	0.659*** (0.000)	0.306*** (0.000)	0.288*** (0.000)	0.289*** (0.000)	0.302*** (0.000)
Local official PC	0.003 (0.643)			0.005 (0.406)	0.009*** (0.001)			0.008*** (0.001)
Central official PC	0.016 (0.380)			0.020 (0.250)	0.024*** (0.000)			0.023*** (0.000)
Local CPC/CPCC		-0.006** (0.043)		-0.008** (0.026)		-0.003 (0.511)		-0.002 (0.572)
Central CPC/CPCC		-0.012*** (0.005)		-0.011*** (0.005)		-0.004** (0.046)		-0.004* (0.057)
Local dual PC			-0.014 (0.181)	-0.013 (0.217)			0.011** (0.022)	0.010* (0.064)
Central dual PC			-0.001 (0.964)	-0.015* (0.098)			0.021** (0.011)	0.021** (0.011)
Reform	-0.083*** (0.000)	-0.083*** (0.000)	-0.082*** (0.000)	-0.046*** (0.000)	-0.058*** (0.000)	-0.048*** (0.000)	-0.052*** (0.000)	-0.055*** (0.000)
Wedge	0.056** (0.020)	0.023* (0.097)	0.032* (0.081)	0.017 (0.165)	0.024** (0.019)	0.022** (0.028)	0.024** (0.028)	0.026*** (0.006)
Mg shares	-0.119*** (0.000)	-0.098*** (0.000)	-0.112*** (0.000)	-0.104*** (0.000)	-0.042 (0.271)	-0.057** (0.023)	-0.082*** (0.001)	-0.018 (0.631)
Firm size	-0.030*** (0.000)	-0.025*** (0.000)	-0.031*** (0.000)	-0.026*** (0.000)	-0.012*** (0.000)	-0.011*** (0.000)	-0.011*** (0.000)	-0.012*** (0.000)
ROA	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.006*** (0.007)	-0.013*** (0.001)	-0.014*** (0.000)	-0.006*** (0.009)
Leverage	0.002* (0.000)	0.002** (0.000)	0.002* (0.000)	0.003** (0.000)	0.053*** (0.000)	0.054*** (0.000)	0.052*** (0.000)	0.056*** (0.000)

	(0.052)	(0.027)	(0.066)	(0.023)	(0.000)	(0.000)	(0.000)	(0.000)
Growth	-0.008**	-0.007*	-0.009**	-0.008**	-0.009***	-0.009***	-0.008***	-0.008***
	(0.047)	(0.060)	(0.021)	(0.021)	(0.000)	(0.000)	(0.000)	(0.000)
Independence	-0.002	0.007	0.001	-0.014	0.019	0.023	0.028	0.009
	(0.961)	(0.857)	(0.977)	(0.714)	(0.259)	(0.214)	(0.204)	(0.636)
Year effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	2450	3013	2281	3416	5394	4442	4127	6083
R-squared	0.283	0.279	0.287	0.251	0.255	0.242	0.238	0.254
F-value	18.04***	17.53***	16.22***	16.92***	23.29***	18.94***	19.10***	22.83***

2.5.3 Impact of founder-manager and the interactive impact between political connection and founder-manager on tunnelling

Based on my earlier analysis in Section 2.3.2.3, I next examine the effect of founder-managers and the interactive effect of founder-managers with political connection on firm tunneling.

Table 2.6 reports the results of regression of tunneling on firm founder status and its intertwining with either Official-type, CPC/PPCC-type, or Dual-type political connection. The sample of firms in each column in Table 2.6 is defined the same as equivalent columns in Table 2.5, as shown by the title of each column.

On the left side, regarding private firms, the coefficients of the stand-alone variables of *Official PC*, *CPC/PPCC*, and *Dual PC* are consistent with those in Table 2.5, that is, only CPC/PPCC-type political connection has a significantly negative impact on tunneling. In every column the coefficient of *Founder* is negative and significant at the 1% level, which confirms my expectation that private firms with founder-managers have significantly less tunneling than those without. The coefficients of the interactions between the type of political connection and founder-manager are all negative. These results indicate that when a firm has a politically connected manager who is also a founder, there is less tunnelling than in those firms with politically connected but non-founder managers, regardless of the type of political connection.

However, of these three interactions, only the coefficient of *CPC/PPCC*Founder* is significant. The results in columns (4) and (5) of all private firms are consistent with those in

columns (1) to (3), and support my expectation that the CPC/PPCC-type of political connection is the main driver of the overall impact of political connection on tunneling in private firms.

On the right side, regarding SOEs, the coefficient of *Founder* is negative and significant at the 5% level in every column, which indicates that SOEs with a founder-manager have significantly less tunnelling than those without. The coefficients of the stand-alone variables of *Official PC*, *CPC/PPCC*, and *Dual PC* also confirm the results in Table 2.5. The coefficients of all three interactions between the type of political connection and founder-manager are negative, but only *Official PC*Founder* is insignificant, which indicates that founder-managers do not significantly reduce tunnelling in those SOEs that have official-type political connection, because official-type political connection leads to significant tunneling in SOEs. Of particular interest is the interaction term *Dual PC*Founder*.

The coefficient of the stand-alone variable *Dual PC* is positive and significant, thus the negative and significant coefficient of *Dual PC*Founder* suggests that founder-managers have a strong reductive impact on tunnelling in SOEs.

Table 2.6 Interactive impact of manager political connection type and founder status on firm tunneling behavior

This table presents OLS regression results of the impacts of manager political connections type, founder status, and interaction between political connection type and founder status on firm tunneling behavior. The dependent variable is *Tunneling* and the key independent variables are three types of political connections (namely *Official PC*, *CPC/CPCC*, and *Dual PC*), *Founder*, and interactions between *Political connection* and *Founder*. Columns (1) to (5) report the results for private firms and columns (6) to (10) report the results for SOEs. Columns (1) and (6) contain only those firms with managers who have official-type political connection and firms without connected managers. Columns (2) and (7) contain only those firms with managers who have CPC/CPCC-type political connection and firms without connected managers. Columns (3) and (8) contain only those firms with managers who have both official-type and CPC/CPCC-type political connection and firms without connected managers. Columns (4) and (5) and columns (9) and (10) contain all private firms and all SOEs, respectively. The definitions of all variables are reported in Table 1. *P*-values based on standard errors corrected for heteroskedasticity using White (1980) are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Dependent variable: Tunneling									
	Private firms					State-owned enterprises (SOEs)				
	Official PC vs. Non-PC	CPC/CPCC vs. Non-PC	Dual PC vs. Non-PC	All private firms	All private firms	Official PC vs. Non-PC	CPC/CPCC vs. Non-PC	Dual PC vs. Non-PC	All SOEs	All SOEs
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Constant	0.730*** (0.000)	0.604*** (0.000)	0.721*** (0.000)	0.625*** (0.000)	0.619*** (0.000)	0.304*** (0.000)	0.289*** (0.000)	0.288*** (0.000)	0.303*** (0.000)	0.301*** (0.000)
Political connection (PC)				-0.009** (0.038)					0.009*** (0.000)	
Official PC	<0.001 (0.953)				<0.001 (0.943)	0.011*** (0.000)				0.011*** (0.000)
CPC/CPCC		-0.013*** (0.004)			-0.014*** (0.003)		-0.002 (0.414)			-0.002 (0.541)
Dual PC			-0.012 (0.243)		-0.013 (0.192)			0.015** (0.039)		0.016** (0.029)
Founder	-0.023*** (0.000)	-0.023*** (0.000)	-0.022*** (0.000)	-0.024*** (0.000)	-0.025*** (0.000)	-0.005** (0.047)	-0.005** (0.023)	-0.005** (0.033)	-0.005** (0.042)	-0.005** (0.041)
PC * Founder				-0.016*** (0.006)					-0.002 (0.564)	
Official PC * Founder	-0.021 (0.139)				-0.021 (0.119)	<-0.001 (0.985)				<-0.001 (0.949)
CPC/CPCC*Founder		-0.021*** (0.000)			-0.021*** (0.000)		-0.008* (0.072)			-0.008* (0.097)
Dual PC * Founder			<-0.001 (0.994)		-0.001 (0.961)			-0.018* (0.058)		-0.016* (0.073)
Reform	-0.081*** (0.000)	-0.080*** (0.000)	-0.079*** (0.000)	-0.079*** (0.000)	-0.078*** (0.000)	-0.058*** (0.000)	-0.048*** (0.000)	-0.052*** (0.000)	-0.055*** (0.000)	-0.055*** (0.000)
Wedge	0.059**	0.017	0.037	0.025	0.026	0.024**	0.022**	0.025**	0.027***	0.026***

	(0.014)	(0.375)	(0.127)	(0.171)	(0.159)	(0.020)	(0.031)	(0.019)	(0.004)	(0.006)
Mg shares	-0.084***	-0.072***	-0.077***	-0.072***	-0.072***	-0.029	-0.047*	-0.068***	-0.009	-0.006
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.465)	(0.069)	(0.010)	(0.824)	(0.868)
Firm size	-0.029***	-0.024***	-0.030***	-0.024***	-0.024***	-0.012***	-0.011***	-0.011***	-0.012***	-0.012***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA	-0.001***	-0.001***	-0.001***	-0.001***	-0.001***	-0.006***	-0.013***	-0.013***	-0.006***	-0.006***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.007)	(0.001)	(0.000)	(0.009)	(0.009)
Leverage	0.002*	0.002**	0.002*	0.002**	0.003**	0.053***	0.054***	0.052***	0.056***	0.056***
	(0.052)	(0.027)	(0.063)	(0.025)	(0.024)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Growth	-0.008**	-0.007*	-0.009**	-0.006*	-0.006	-0.009***	-0.009***	-0.008***	-0.009***	-0.009***
	(0.045)	(0.060)	(0.019)	(0.098)	(0.101)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Independence	0.005	0.010	0.004	<0.001	-0.002	0.019	0.024	0.028	0.009	0.009
	(0.908)	(0.797)	(0.932)	(0.989)	(0.965)	(0.276)	(0.187)	(0.185)	(0.603)	(0.628)
Year effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	2450	3013	2281	3416	3416	5394	4442	4127	6083	6083
R-squared	0.287	0.284	0.292	0.274	0.275	0.254	0.242	0.238	0.252	0.253
F-value	18.13***	17.79***	16.58***	19.98***	17.96***	22.42***	18.28***	18.29***	24.95***	22.00***

Table 2.7 reports the results of regression of tunneling on manager's founder status and its intertwining with either local level or central level political connection. Columns (1) to (3) report the regression results for private firms and columns (4) to (6) report the results for SOEs.

The coefficient of *Central PC* is negative and significant in columns (1) to (3), but the coefficient of *Local PC* is insignificant. In columns (4) to (6), although all the coefficients of *Central PC* and *Local PC* are positive and significant at the 1% level, the former are about double the magnitude for the latter. These results confirm the results in Table 2.5 where manager political connections at the central level have a greater impact on tunneling than connections at the local level. For both private firms and SOEs, the coefficient of the stand-alone variable *Founder* and the coefficient of the interaction term *Central PC*Founder* are negative and significant, while the coefficient of *Local PC*Founder* is insignificant. These results indicate that the negative relation between founder-manager and tunneling is stronger in firms with centrally connected managers than in firms with locally connected managers only.

Thus, the results in Tables 2.6 and 2.7 confirm **H3** that, for both private firms and SOEs, those firms with founder-managers have significantly less tunneling than those without. The negative effects of founder-managers on tunneling are also observed in politically connected firms. Founder managers have a special incentive to maintain the firm's long term development and survival. The tradeoff between interest and effort is greater from a founder manager's perspective than from a politically connected manager's perspective.

Table 2.7 Interactive impact of manager political connection level and founder status on firm tunneling behavior

This table presents OLS regression results of the impacts of manager political connections level, founder status, and interaction between political connection level and founder status on firm tunneling behavior. The dependent variable is *Tunneling* and the key independent variables are two levels of political connections (namely *Local PC* and *Central PC*), *Founder*, and interactions between *Political connection* and *Founder*. Columns (1) to (3) report the results for private firms and columns (4) to (6) report the results for SOEs. Columns (1) and (4) test the stand-alone impacts of *Political connection level* on tunneling. Columns (2) and (5) include the interaction terms between *Political connection level* and *Founder*. Columns (3) and (6) also include the stand-alone *Founder* variable. The definitions of all variables are reported in Table 1. *P*-values based on standard errors corrected for heteroskedasticity using White (1980) are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Private firms			State-owned enterprises (SOEs)		
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	0.641*** (0.000)	0.640*** (0.000)	0.624*** (0.000)	0.305*** (0.000)	0.304*** (0.000)	0.304*** (0.000)
Local PC	-0.004 (0.246)	<0.001 (0.981)	-0.005 (0.281)	0.006*** (0.004)	0.007*** (0.003)	0.007*** (0.006)
Central PC	-0.009** (0.035)	-0.013** (0.032)	-0.017*** (0.003)	0.010*** (0.001)	0.014*** (0.000)	0.014*** (0.000)
Founder			-0.023*** (0.000)			-0.005** (0.043)
Local PC*Founder		0.008 (0.293)	-0.009 (0.145)		-0.006 (0.160)	-0.001 (0.799)
Central PC*Founder		-0.011** (0.015)	-0.029*** (0.000)		-0.012*** (0.009)	-0.007* (0.085)
Reform	-0.082*** (0.000)	-0.081*** (0.000)	-0.079*** (0.000)	-0.055*** (0.000)	-0.055*** (0.000)	-0.055*** (0.000)
Wedge	0.020 (0.269)	0.023 (0.213)	0.026 (0.153)	0.026*** (0.006)	0.027*** (0.005)	0.027*** (0.004)
Mg shares	-0.101*** (0.000)	-0.096*** (0.000)	-0.072*** (0.000)	-0.026 (0.492)	-0.021 (0.589)	-0.010 (0.803)
Firm size	-0.025*** (0.000)	-0.025*** (0.000)	-0.024*** (0.000)	-0.012*** (0.000)	-0.012*** (0.000)	-0.012*** (0.000)
ROA	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.006*** (0.009)	-0.006*** (0.009)	-0.006*** (0.008)
Leverage	0.003** (0.025)	0.003** (0.024)	0.003** (0.024)	0.057*** (0.000)	0.057*** (0.000)	0.056*** (0.000)
Growth	-0.006* (0.100)	-0.006* (0.096)	-0.006* (0.095)	-0.009*** (0.000)	-0.009*** (0.000)	-0.009*** (0.000)
Independence	-0.003 (0.924)	-0.005 (0.886)	-0.002 (0.949)	0.010 (0.593)	0.009 (0.617)	0.001 (0.792)
Year effect	Yes	Yes	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	3416	3416	3416	6083	6083	6083
R-squared	0.269	0.270	0.274	0.251	0.251	0.252
F-value	19.51***	18.41***	18.63***	25.86***	24.16***	23.39***

2.5.4 Difference between the chairman's and the CEO's political connection on tunneling

I hypothesize in Section 2.3.3.4 that the chairman's political connection is more influential on firm tunneling than the CEO's political connection, and in this section I formally test this hypothesis. The results for private firms are reported in columns (1) to (3) and the results for SOEs are reported in columns (4) to (6) of Table 2.8.

The sample in Column (1) of Table 8 contains private firms where the chairman is politically connected (regardless of the type of connection) and private firms without political connection. The sample in Column (2) contains private firms where the CEO is politically connected and private firms without political connection. In 735 of the 3416 private firms the chairman and CEO is the same person. Thus, as general practice, I introduce a new control variable *Duality* which is a dummy variable that takes the value of 1 if the chairman and the CEO is the same person. The coefficient of *Chair PC* in column (1) is negative and significant at the 5% level. The coefficient of *CEO PC* in column (2) is positive but insignificant. The results in column (3), which contains all private firms, are consistent with those in columns (1) and (2).

Recall the results in Table 2.4 where the chairman's and CEO's political connections are aggregated into a single variable *Political connection*; the coefficient of *Political connection* in column (4) in Table 2.4 is negative and significant. Thus, I can conclude that for private firms, the overall impact of manager political connection on tunneling is negative and almost certainly driven by the chairman's political connection because the CEO's political connection has an opposite (although insignificant) impact.

The samples in columns (4) to (6) are similarly designed as those in columns (1) to (3) respectively, except that private firms are replaced by SOEs. The coefficient of *Chair PC* in column (4) and (6) is positive and significant at the 1% level, but the coefficient of *CEO PC* is negative but insignificant. In Table 2.4 the coefficient of *Political connection* is positive and significant for SOEs, so for SOEs, the overall impact of manager political connection on tunneling is also almost certainly driven by the chairman's political connection.

Thus, the results in Table 2.8 support **H4** that, for private firms and SOEs, the chairman's political connection is more influential than the CEO's political connection, with respect to their impacts on firm tunneling. In the Chinese context, chairmen are not only (the representatives) controlling shareholders, they are also involved in routine decision making, so the chairmen, not CEOs, are the top executives and wield the most power.

2.6 Robustness checks

The preceding analyses provide evidence on the relation between manager political connection and firm tunneling. There is a potential endogeneity problem particularly for firms with severe tunneling, because they are more likely to appoint politically connected managers to mitigate the adverse impact of tunneling on firm performance and stock market reactions. In this section, I address the potential endogeneity concern and then test the sensitivity of my results with alternative model specifications.

Table 2.8 Different impact of the chairman's political connection and the CEO's political connection on firm tunneling behavior

This table presents OLS regression results of the different impacts of the Chairman's political connection and the CEO's political connection on firm tunneling behavior. The dependent variable is *Tunneling* and the key independent variables are *Chair PC* and *CEO PC*. *Chair PC* is a dummy variable that equals 1 if the chairman has political connection. *CEO PC* is a dummy variable that equals 1 if the CEO has political connection. The definitions of all other variables are reported in Table 1. Columns (1) to (3) report the results for private firms and columns (4) to (6) report the results for SOEs. *P*-values based on standard errors corrected for heteroskedasticity using White (1980) are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Dependent variable: Tunneling					
	Private firms			State-owned enterprises (SOEs)		
	Chair PC firms vs. Non-PC firms	CEO PC firms vs. Non-PC firms	All private firms	Chair PC firms vs. Non-PC firms	CEO PC firms vs. Non-PC firms	All SOEs
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	0.630*** (0.000)	0.701*** (0.000)	0.642*** (0.000)	0.295*** (0.000)	0.280*** (0.000)	0.300*** (0.000)
Chair PC	-0.008** (0.015)		-0.007** (0.038)	0.008*** (0.000)		0.009*** (0.000)
CEO PC		0.006 (0.155)	0.002 (0.707)		-0.002 (0.422)	-0.004 (0.141)
Duality	-0.005 (0.250)	-0.005 (0.272)	-0.005 (0.257)	0.006* (0.091)	0.009** (0.014)	0.007* (0.063)
Reform	-0.080*** (0.000)	-0.080*** (0.000)	-0.082*** (0.000)	-0.056*** (0.000)	-0.053*** (0.000)	-0.055*** (0.000)
Wedge	0.021 (0.253)	0.028 (0.215)	0.021 (0.241)	0.028*** (0.004)	0.023** (0.023)	0.026*** (0.006)
Mg shares	-0.096*** (0.000)	-0.090*** (0.000)	-0.094*** (0.000)	-0.077*** (0.002)	-0.052 (0.189)	-0.033 (0.409)
Firm size	-0.025*** (0.000)	-0.028*** (0.000)	-0.025*** (0.000)	-0.012*** (0.000)	-0.011*** (0.000)	-0.012*** (0.000)
ROA	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.006*** (0.009)	0.006*** (0.002)	-0.006*** (0.009)
Leverage	0.002** (0.025)	0.002** (0.037)	0.003** (0.025)	0.056*** (0.000)	0.046*** (0.000)	0.056*** (0.000)
Growth	-0.006 (0.112)	-0.006 (0.136)	-0.006 (0.103)	-0.008*** (0.000)	-0.009*** (0.000)	-0.009*** (0.000)
Independence	0.001 (0.985)	0.009 (0.824)	-0.001 (0.975)	0.009 (0.611)	0.002 (0.917)	0.008 (0.690)
Year effect	Yes	Yes	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	3282	2721	3416	5867	4776	6083
R-squared	0.267	0.281	0.270	0.252	0.240	0.252
F-value	18.54***	18.56***	18.92***	24.91***	20.86***	24.86***

2.6.1 Endogeneity of political connection

One general practice used to solve the endogeneity problem is the instrumental variable (IV) approach. An appropriate IV needs to satisfy two conditions. First, the IV needs to be exogenous in the main regressions, and second the IV must be correlated to the endogenous variable, conditional on other covariates. I use three IVs in this study; the first IV is the registered unemployment rate (*Unemployment*) in the province where a firm is headquartered, the second IV is the natural logarithm of GDP per capita (*Log GDP*) in the province where a firm is headquartered, and the third IV is the ratio of total domestic deposits in financial institutions to total GDP (*Savings ratio*) in the province where a firm is headquartered. These IVs are obtained directly from the website of the National Bureau of Statistics of China (NBSC) or calculated based on the data from the NBSC.

All these three IVs are related to the availability of capital, in that it is easier for a firm to obtain external financing if it is located in regions with a lower unemployment rate, higher GDP per capita, and a higher savings to GDP ratio. Thus, firms in these regions have fewer incentives to establish political connection. Furthermore, governments (the controlling shareholders of SOEs) in these regions have less political and social pressure (e.g., redundant workers and social unrest) to intervene into the operations of SOEs by appointing politically connected managers. I, however, do not expect these three IVs to have a significant impact on firm tunneling.¹² Thus, all these three IVs satisfy the two conditions for an appropriate IV.

¹² In unreported results, I run regressions of firm tunneling on these three IVs. After controlling for other factors, none of these three IVs has significant impact on tunneling, either in private firms or in SOEs.

I use the regressions in Table 2.6 as examples for this robustness test and the results are arranged in Table 2.9. The two-stage least squares (2SLS) model is applied. In the first stage, I run *probit* regressions of manager political connection type on these three IVs. All the control variables used in the main regressions in Table 2.6 are also included in the first stage. In the second stage the predicted values from the first stage are used as the key independent variable, as well as other control variables. In Table 2.9, columns (1) to (3) and columns (5) to (7) report the results of the first stage for private firms and SOEs, respectively. Columns (4) and (8) report the results of the second stage for private firms and SOEs, respectively.

In columns (1) to (3), the dependent variables are dummies of *Official PC*, *CPC/CPGCC*, and *Dual PC*. It can be seen from the negative and significant coefficients, that *Unemployment*, *Log GDP*, and *Savings ratio* impact the probability of a firm establishing political connection, which satisfies the IV selection criteria. In column (4), the dependent variable is *Tunneling* and the key independent variables, namely *Official PC*, *CPC/CPGCC*, and *Dual PC*, are the predicted values (labeled “instrumented”) from the first stage regressions. If I compare the results in column (4) with the corresponding results in column (5) in Table 2.6, it is obvious that the coefficients are of the same sign but are either larger or more significant than those in Table 2.6. For example, the coefficient of *CPC/CPGCC* in column (4) in Table 2.9 is -0.172, while the coefficient of *CPC/CPGCC* in column (5) in Table 2.6 is -0.014. A similar comparison can be made between the SOEs in Table 2.6 and the SOEs in Table 2.9. Thus, the results from the 2SLS regressions confirm the results in Table 2.6.

Table 2.9 2SLS instrumental variable (IV) analyses of impact of manager political connection type, founder status, and their interaction on firm tunneling behavior

This table presents the results of two-stage least squares (2SLS) instrumental variable (IV) regressions of the impacts of manager political connection type, founder status, and their interaction on firm tunneling behavior. Columns (1) to (4) report the results for private firms and columns (5) to (8) report the results for SOEs. Columns (1) to (3) and columns (5) to (7) report the results of the first stage, in which probit regressions are used. The dependent variables in the first-stage regressions are three types of political connections, namely *Official PC*, *CPC/CPPCC*, and *Dual PC*. Columns (4) and (8) report the results of the second stage, in which OLS regressions are used. The dependent variable in the second-stage regressions is *Tunneling*. I use three instrumental variables (IVs) in the first stage. These IVs are Unemployment, Log GDP, and Savings ratio. The definitions of these three IVs and of all other variables are reported in Table 1. *P*-values based on standard errors corrected for heteroskedasticity using White (1980) are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

	Private firms				State-owned enterprises (SOEs)			
	1st stage			2nd stage	1st stage			2nd stage
	Official PC	CPC/CPPCC	Dual PC	Tunneling	Official PC	CPC/CPPCC	Dual PC	Tunneling
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Constant	-0.390 (0.690)	-5.445*** (0.000)	-4.204*** (0.000)	0.727*** (0.000)	-4.059*** (0.000)	0.729 (0.279)	-2.743*** (0.000)	0.302*** (0.000)
Official PC (Instrumented)				0.046* (0.064)				0.108*** (0.000)
CPC/CPPCC (Instrumented)				-0.172*** (0.006)				-0.004 (0.870)
Dual PC (Instrumented)				-0.131** (0.038)				0.107** (0.042)
Founder				-0.096*** (0.000)				-0.039*** (0.009)
Official PC * Founder (Instrumented)				-0.290*** (0.006)				0.023** (0.035)
CPC/CPPCC * Founder (Instrumented)				-0.244*** (0.000)				-0.051* (0.063)
Dual PC * Founder (Instrumented)				-0.321* (0.068)				0.158** (0.048)
Unemployment	0.238*** (0.000)	-0.232*** (0.000)	-0.085 (0.182)		0.110*** (0.000)	-0.190*** (0.000)	0.085** (0.045)	
Log GDP	-0.326*** (0.000)	-0.133** (0.021)	-0.221** (0.014)		0.173*** (0.000)	-0.201*** (0.000)	-0.174*** (0.007)	
Savings ratio	0.779*** (0.001)	-0.132 (0.468)	0.138*** (0.002)		0.186 (0.121)	-0.439*** (0.007)	0.170 (0.423)	
Reform	-0.131 (0.235)	0.261*** (0.003)	-0.039 (0.774)	-0.076*** (0.000)	-0.011 (0.852)	0.016 (0.842)	0.017 (0.877)	-0.055*** (0.000)
Wedge	0.091 (0.809)	1.052*** (0.000)	0.983** (0.046)	0.013 (0.509)	1.711*** (0.000)	0.208 (0.511)	1.542*** (0.005)	0.027*** (0.006)

Mg shares	-1.568*	0.929***	1.080	-0.118***	-9.940**	2.107	-19.132***	-0.023
	(0.071)	(0.001)	(0.141)	(0.000)	(0.049)	(0.112)	(0.001)	(0.696)
Firm size	0.025	0.342***	0.203***	-0.029***	0.042**	0.052**	0.129***	-0.012***
	(0.432)	(0.000)	(0.000)	(0.000)	(0.012)	(0.017)	(0.000)	(0.000)
ROA	-0.006	-0.034	0.022**	-0.001***	-0.042	0.022	0.002	-0.006***
	(0.813)	(0.522)	(0.036)	(0.000)	(0.174)	(0.405)	(0.821)	(0.009)
Leverage	-0.077**	-0.153	-0.180**	0.002**	-0.021	-0.025	-0.036	0.056***
	(0.029)	(0.145)	(0.041)	(0.043)	(0.698)	(0.776)	(0.690)	(0.000)
Growth	-0.002	0.003	0.023	-0.005	-0.015	<-0.001	-0.015	-0.008***
	(0.971)	(0.936)	(0.599)	(0.106)	(0.631)	(0.997)	(0.797)	(0.000)
Independence	0.175	0.591	-1.714*	-0.037	0.682*	-0.787	-1.656**	0.006
	(0.761)	(0.215)	(0.071)	(0.336)	(0.058)	(0.104)	(0.031)	(0.761)
Year effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of Obs.	3416	3416	3416	3416	6083	6083	6083	6083
Wald Chi2	100.08***	320.98***	47.43***		183.22***	38.74***	80.31***	
Pseudo R squared	0.054	0.094	0.051		0.030	0.015	0.031	
Log pseudo likelihood	-926.600	-1733.162	-477.534		-3244.636	-1706.715	-809.206	
R-squared				0.286				0.253
F-value				19.37***				22.31***

I argue that political connection has different impacts in private firms and SOEs. Therefore, the potential endogeneity problems could be also different in these two types of firms. Specifically, for private firms, managers establish CPC/PPCC-type connection if their firms perform well, indicating these firms have less severe tunneling. While for SOEs, governments appoint politically connected managers to mitigate adverse impact of tunneling on firm performance and stock market reactions. I therefore use the propensity score matching (PSM) approach to address such an endogeneity concern. In untabulated results, the impacts of Official PC, CPC/PPCC, and Dual PC are largely consistent with those reported in Table 2.5. Manager CPC/PPCC-type connection (central and local combined) has a negative and significant impact on tunneling in private firms (coef. = -0.009, $p = 0.042$) and manager official-type connection (central and local combined) has a positive and significant impact on tunneling in SOEs (coef. = 0.014, $p = 0.000$).

2.6.2 Alternative regression specifications

In the main analyses the divergence (*Wedge*) between the controlling shareholder's control rights and cash flow rights is a continuous variable measured by the difference. As a robustness test, I replace this continuous variable with a dummy variable that takes the value of 1 if a divergence exists and zero otherwise. my main results remain unchanged with this alternative definition. Literature finds that institutional development is an important factor that affects controlling shareholders' tunneling behavior, so to control for the variations in institutional development in different regions I add a dummy variable for each province where a firm is headquartered. Again, the main results remain qualitatively unchanged.

2.7 Conclusions

To fill a gap in the literature, I investigate whether and how managers' political connection status and founder status affect firm tunneling behaviour, using a sample of 9499 firm-year observations of publicly listed firms over the period of 2004–2010. I find that both manager political connection and founder status have a significant impact on firm's tunneling behavior. For private firms overall manager political connection is negatively related to firm tunneling. This negative relation is almost entirely driven by manager's CPC/PPCC-type political connection, and this negative relation is stronger for political connections at the central level than at the local levels. In contrast, for SOEs, overall manager political connection is positively related to firm tunneling. This positive relation is almost entirely driven by manager's official-type connection, and this positive relation is greater for political connections at the central level than at the local levels.

These results indicate that manager political connection in private firms is more likely to compete for resources and protect firms from adverse events. Manager political connection in SOEs is more likely to be formed to fulfill the social goals of governments. Official-type connected managers may have a rent seeking incentive, while CPC/PPCC-type connected managers are better able to prevent firms from tunneling. The motivation and capabilities are more powerful if the political connection is at the central level.

I also find that for both private firms and SOEs, firms with founder-managers have more resistance to tunneling than those without because founder-managers have higher monetary interests than non-founder-managers, and the interest and effort required for a tradeoff is greater from a founder-manager's perspective than from a politically connected manager's

perspective. Therefore, if a politically connected manager is also a founder, the possibility of tunneling due to political connection, if it exists, is also reduced. The incentive for a politically connected founder-manager to tunnel is weaker than a politically connected non-founder-manager.

Finally, I test the impact of the chairman's and the CEO's political connection on firm tunneling. I generate evidence that the chairman's political connection has a significantly greater impact on tunneling than the CEO's political connection. Thus the results support the notion that the chairman, rather than the CEO, is the top executive in Chinese firms. This finding may have important implications for research regarding the behavior of top executives in the Chinese context.

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Chapter Three Cost of borrowing in family firms:

The role of corporate opacity

3.1 Introduction

In recent years a small but growing body of literature (e.g., Anderson et al., 2003; Ellul et al., 2007; Boubakri and Ghouma, 2010; Lin et al., 2011) has explored the impact of family ownership on the shareholder-debtholder agency problem. Empirical evidence has been inconclusive so far. In particular, one question remains largely unaddressed. Are family firms, at least within a country, heterogeneous in their impact on the shareholder-debtholder agency conflict and hence the cost of debt?

Many existing studies seem to assume that family owners are a homogeneous group of blockholders, so that they have similar characteristics of agency issues. Yet this assumption ignores some other studies documenting different incentives among family firms and how these differences affect the agency conflicts between family blockholders and outside investors (e.g., Leuz and Oberholzer-Gee, 2006; Chen et al., 2014; Lins et al., 2013). Therefore, it is sensible to examine the firm-level difference in shareholder-debtholder agency conflicts among family firms.

In this chapter, I focus on one firm-level factor that is well-known to be associated with agency conflicts and yet largely ignored in the examination of the impact of family ownership on the cost of debt. This particular factor is corporate information opacity, which plays a central role both in determining the extent of agency conflicts between shareholders,

managers, and creditors and in designing the mechanisms to mitigate them (Jensen and Meckling, 1976; Smith and Warner, 1979; Bushman and Smith, 2001; Bushman et al., 2004).

Controlling families' large undiversified equity positions provide them with greater incentives and abilities for both monitoring and expropriating (e.g., Demsetz and Lehn, 1985; Shleifer and Vishny, 1997; Burkart et al., 2003). This can lead to either positive or negative impact of family control on a firm's cost of debt, depending on whether family owners' entrenchment incentive dominates their alignment incentive. However, controlling families' incentive *per se* is not directly observable.

Opaque corporate information leads outside investors to perceive that controlling shareholders are more likely to expropriate outside investors, compared to when information is more transparent (Fan and Wong, 2002; Leuz et al., 2003; Lang et al., 2004; Francis et al., 2005b; Anderson et al., 2009). Wang (2006) argues that greater information asymmetry between controlling families and other investors is one source of entrenchment for the controlling families. Thus, opaque information deters outside investors from investing in the firms and increases the cost of external financing (Myers and Majluf, 1984; La Porta et al., 2000). In contrast, more transparent information restrains controlling families from opportunistic behavior because when information is transparent their appropriation of private benefits is more likely to be detected by outside investors. The analysis above thus implies that as corporate information opacity increases, either the controlling families' positive (entrenchment) effect on the cost of debt is intensified or the negative (alignment) effect is weakened.

In this chapter I examine how corporate information opacity affects the impact of family control (i.e., the interactive impact of corporate opacity and family control) on the cost of external debt financing, using a sample of 3320 firm-year observations of privately (i.e., nonstate) controlled but publicly listed firms in China between 2004 and 2010. I follow the approach in Anderson et al. (2009) to measure corporate opacity with a comprehensive index that consists of four components based on stock trading information and analyst coverage. My univariate statistics and multivariate results show that family firms in China on average pay a substantially lower cost of debt relative to nonfamily firms, which I attribute to the fact that family firms overall are significantly less opaque than nonfamily firms.

My findings suggest that for controlling families in China as a whole, their alignment incentives seem to dominate their entrenchment incentives. I further find that family control reduces the cost of debt only in those firms with relatively less opaque information. In the full sample the interaction between family ownership/control and corporate opacity is positive and significant, which suggests that the negative impact of family control on the cost of debt becomes weaker as corporate opacity increases. The results confirm my analysis that corporate opacity plays a moderating role in the relationship between family control and the cost of debt.

My research design allows us to dig even deeper into the drivers of the moderating role of corporate opacity. One important feature of the institutional environment in China is the wide regional disparity in economic development and institutional efficiency.¹³ Such a cross-

¹³ For instance, in a 2006 report the World Bank surveys investment climate of 120 cities (and 12,400 firms) across 30 provinces (i.e., all provinces excluding Tibet) in China and finds a wide cross-region variation in investment climate. For example, per capita GDP in Southeast China averages more than 150% above Central

region disparity in institutional environment allows us to examine whether and how the moderating impact of corporate opacity is further influenced by external institutions, which affect outside investors' perception about controlling families' incentives and capabilities to engage in expropriation activities (La Porta et al., 2000; Ellul et al., 2007; Boubakri and Ghouma, 2010). At the same time, because business laws, culture, and social norms are basically the same across China; thus, compared to other multinational studies, my single-country setting enables us to better disentangle the impact of institutional efficiency from that of other external country-level factors.

I conjecture that corporate opacity, as an indicator of controlling shareholder's alignment/entrenchment incentives, plays a greater moderating role in the relationship between family control and the cost of debt when external institutions are relatively weaker. The empirical evidence supports my expectation in that the interaction between family ownership and corporate opacity is significant only for firms located in provinces with weaker institutions. The finding is consistent with the notion that perceived expropriation by controlling families, which is severer when external institutions are weaker (Claessens et al., 2002; Lins et al., 2003), motivates creditors to demand more transparent information in order for better monitoring, causing the impact of family control on the cost of debt to be more sensitive to corporate opacity.

and Southwest China. Firms at the 10th percentile of cities spend an average 36 days per year in interacting with major bureaucracies, compared to 87 days for firms at the bottom 10th percentile cities. Fan et al. (2011) largely confirm the inequality in economic and market development as well as government efficiency at the province level.

In addition to external institutions, I also consider two other factors that the literature finds to be related to the controlling shareholders' alignment/entrenchment incentives. Prior studies find that controlling shareholders have greater incentives to expropriate outsider investors when the divergence of controlling shareholders' control rights from cash flow rights (control-ownership wedge) is larger (Johnson et al., 2000; Claessens et al., 2002; Lin et al., 2011) and for Chinese private firms when they are not politically connected (Ma et al., 2013). I find that the negative impact of family control on debt cost is more likely to be weakened with increasing corporate opacity when the controlling families' moral hazard of expropriation is higher, i.e., when control-ownership wedge is higher and when a firm is not politically connected.

My findings are robust to alternative measures of corporate opacity. Two alternative measures are used in the robustness check. They are discretionary accruals and external auditor identity (i.e., whether the external auditor is a large auditor), both of which are well documented in the literature as plausible opacity measures (e.g., Francis et al., 2005; Armstrong et al., 2010) and which the management of the firm initiate and have great control over. My findings are also robust to controlling for the endogeneity concerns about family ownership and the relationship between information disclosure and cost of capital (Nikolaev and van Lent, 2005). I apply the instrumental variable (IV) approach and estimate two-stage least squares regressions.

The IVs include *Personal name*, *Multiple founders*, *Personal name*Opacity index*, and *Multiple founders*Opacity index*, where *Personal name* is a dummy variable indicating that the name of the firm at the time of IPO contains at least part of the personal name(s) of the founder(s) and *Multiple founders* is a dummy variable indicating that the firm has more than

one founder (from different families). Prior studies (e.g., Adams et al., 2009; Fahlenbrach, 2009) find that both *Personal name* and *Multiple founders* are correlated to family ownership; but no evidence suggests that they have an impact on a firm's cost of debt. The results show that my findings are not driven by the endogeneity of family control.

My study contributes to the literature in several ways. First, by examining the impact of family control on debt costs, this study helps to enhance our understanding of an important aspect of family firm behavior, debt financing. This is particularly relevant for the Chinese market because existing studies focusing on Chinese family firms are limited (Cheng, 2014), particularly in the field of the impact of family control on shareholder-debtholder conflict, despite the importance of family firms to the overall Chinese economy. The implication from this study that family owners should be viewed as a heterogeneous group of blockholders with firm-level difference in the relative dominance of the alignment or entrenchment incentive also contributes to the small but growing literature about family control on shareholder-debtholder agency problems.

Second, I identify a channel through which family firms can directly benefit from a lower cost of debt, and more importantly, unlike those country-level factors, corporate opacity can be influenced by firm-level corporate governance. Anderson et al. (2003) find that family firms pay lower costs of debt than nonfamily firms but they treat all family firms universally and do not show how or when. Ellul et al. (2007), on the other hand, find that family firms originating from countries with a high level of investor protection benefit from a lower cost of debt than nonfamily firms. However, it is obvious that country-level legal institutions are beyond the control of individual firms. I instead focus on firm-level corporate opacity, which

is heavily influenced by internal corporate governance (Fan and Wong, 2002; Leuz et al., 2003; Lang et al., 2004; Francis et al., 2005b; Wang, 2006; Anderson et al., 2009).

I provide clear evidence that family firms can benefit from a lower cost of debt by reducing corporate opacity. I further show that corporate opacity plays a particularly important role in reducing the cost of debt for family firms in an environment with weak external legal institutions, which is exactly when family firms are more likely to suffer from a higher cost of debt (Ellul et al., 2007). My study also provides important complementary evidence to prior literature that mainly uses either U.S. or multinational data.

Third, I generate direct evidence that corporate opacity appears to be substantially more important than some other factors examined by prior studies (e.g., control-ownership wedge, external institutions, and a firm's political connection) in explaining the relationship between family control and the cost of debt. This finding has important implications for family firms. For example, family firms commonly use various control-enhancing mechanisms to exercise effective control over firms with a relatively small equity ownership, which results in excess control rights over cash flow rights, not only in developing countries but also in developed countries such as the U.S. (Claessens et al., 2000; Faccio and Lang, 2002; villalonga and Amit, 2009).

Prior studies find that wide control-ownership wedges would cause family firms to pay higher costs of debt because of perceived high expropriating potential (Boubakri and Ghouma, 2010; Lin et al., 2011). But I find that, even with wide control-ownership wedges, family firms can still benefit from lower costs of debt if corporate information is relatively less

opaque. In other words, family firms do not have to sacrifice those important control-enhancing structures to benefit from lower costs of debt.

The rest of this chapter proceeds as follows. Section 3.2 reviews related literature and presents my hypotheses. Section 3.3 describes the sample and data. Section 3.4 reports the main empirical results. Section 3.5 tests the robustness of the results to different opacity measures and to various model specifications. Finally, Section 3.6 sets forth conclusion.

3.2 Literature Review and Hypothesis Development

The presence of a dominant and powerful family blockholder reshapes a firm's agency problems (Shleifer and Vishny, 1997; La Porta et al., 2000). The literature so far has provided only limited direct theoretical analysis on how controlling families' unique positions and incentives affect the firms' cost of debt. Furthermore, empirical evidence has been inconclusive so far. In this section I first review some existing studies. I then rely on related literature to develop my hypotheses on how corporate information opacity affects the relationship between family ownership/control and the cost of debt.

3.2.1 Empirical Evidence on the Relationship between Family Ownership and Cost of Debt

Anderson et al. (2003), using a sample of S&P 500 firms, find that family firms on average pay 32 basis points lower than nonfamily firms on debt financing. The authors attribute family firms' lower debt cost to families' interest in the firms' long-term survival and the families' concern for their reputation, which give families strong incentives to alleviate

agency conflict between large shareholders and debtholders. However, the conclusion in Anderson et al. (2003) may not be automatically generalized to China for the following reason.

The sample firms in Anderson et al. (2003) are based in the U.S., which is widely considered as having one of the strongest investor protection and creditor rights; while China has a considerably weaker institutional environment than the U.S. The literature (e.g., Claessens et al., 2002; Lins et al., 2003) has found that the incentives and capabilities of controlling shareholders in extracting private benefits of control largely depend on external investor protection of the country in which a firm is located. Controlling families' concentrated ownership and dominant positions may give them both incentives and capabilities to abuse their control and to expropriate minority shareholders and creditors (e.g., Jensen and Meckling, 1976; Johnson et al., 2000; Djankov et al., 2008); but on the other hand, families' strong interest in the long-term survival of their firms motivates them to take a long-term and low-risk approach (Anderson et al., 2003; Fahlenbrach, 2009; Achleitner et al., 2014).

The analysis suggests that, compared to nonfamily blockholders, family ownership/control can either exacerbate or alleviate the shareholder-debtholder agency conflicts and hence to increase or reduce debt cost, depending on external institutions. Consistent with this view, Ellul et al. (2007) find that family firms in high-investor-protection countries benefit from lower debt cost but suffer from higher debt cost in low-investor-protection countries.

In this chapter I first perform an initial test to see if family firms still enjoy a lower cost of debt relative to nonfamily firms in China, a country characterized by weak external institutions. I then develop my hypotheses on the moderating role of firm-level corporate

information on the relationship between family control and cost of debt. Finally, I hypothesize and test how the moderating role of corporate information is further influenced by controlling families' moral hazard.

3.2.2 Hypothesis development

3.2.2.1 Corporate opacity and the relationship between family control and firms' cost of debt

Economic theory suggests that the relationship between family control and a firm's cost of debt can be affected by the relative opacity of the firm's information. It is well established that accounting and financial information can be used to mitigate the agency conflicts between shareholders, managers, and creditors (Smith and Warner, 1979; Watts and Zimmerman, 1986; Bushman and Smith, 2001). With respect to external debt financing, the literature suggests that corporate information plays two crucial roles in mitigating agency conflicts between shareholders, managers, and creditors.

First, corporate information plays a formal and explicit role in the negotiation and setting of debt contracts. Creditors often require the inclusion in debt contracts certain clauses and covenants which are based on accounting and financial information supplied by the borrowing firms (Smith and Warner, 1979; Watts and Zimmerman, 1986). Transparent corporate information not only allows creditors to assess the borrowing firms' ability to repay the debt, but also enables creditors and borrowing firms to design clauses and covenants of debt contracts that alleviate potential conflicts between debt-contracting parties. In other words, more efficient debt contracts are possible when borrowing firms are committed to a more transparent information environment (Armstrong et al., 2010). Therefore, relatively

transparent corporate information reduces lenders' demand for monitoring and the extent of the bonding mechanism (e.g., clauses and covenants of debt contracts), which in turn lowers the costs of debt.

With respect to the cost of debt for my sample of Chinese family firms, a second and possibly more important role of corporate opacity is in informal debt contracting, specifically in establishing the reputation of the controlling families and the working relationship between borrowing firms and creditors. Although debt contracts between firms and creditors are formal and explicit, informal contracts, which often comprise implicit multi-period relationships, also play an important role in mitigating agency problems (Watts and Zimmerman, 1986; Armstrong et al., 2010).

The importance of informal debt contracts is even more significant in countries with weak formal institutions, where legal enforcement of formal contracts is less effective and efficient (Armstrong et al., 2010). Armstrong et al. (2010) suggest that informal debt contracts rely more generally on borrowing firms' commitment to transparent information but less on the effectiveness of the regulatory and legal system. Therefore, this implies that when family firms have less commitment to transparent information (i.e., when corporate information is relatively more opaque), the costs of informal debt contracting (e.g., negotiation, design, monitoring, and enforcement) are higher, compared to when corporate information is less opaque. Consequently, the costs of debt also increase as corporate opacity increases.

Taken together, the abovementioned analysis suggests that relatively opaque corporate information increases not only the costs of formal debt contracting, but also the costs of informal debt contracting. This implies that the relationship between family control and the

cost of debt is affected by the relative opacity of corporate information. As corporate opacity increases, creditors demand higher returns from their investment to cover at least partially higher costs of both formal and informal debt contracting. Thus, relatively opaque corporate information will either weaken the negative impact of family control on the cost of debt. Therefore, I state the first hypothesis as follows:

H1: The negative relationship between family control and the cost of debt becomes weaker as corporate opacity increases.

3.2.2.2 Dominant shareholder moral hazard and the impact of corporate opacity on the relationship between family control and firms' cost of debt

I have theoretically inferred that family firms' alignment incentives dominate their entrenchment incentives when corporate information is relatively less opaque. However, it is reasonable to assume that the relative dominance of these two types of incentive is impacted by some important factors, and outside investors will adjust their perception accordingly. For example, a large wedge of control rights and cash flow rights is viewed as a signal that controlling shareholders are more likely to expropriate outside investors (Shleifer and Vishny, 1997; Johnson et al., 2000; Claessens et al., 2002; Lin et al., 2011). A weak institutional environment is also likely to foster firms' expropriation behavior (La Porta et al., 2000; Dyck and Zingales, 2004).

If creditors perceive a higher probability of opportunistic and expropriating behavior by controlling families, they have a greater incentive to monitor the controlling families more closely in order to protect their investments in the firms. In this process, creditors may

demand more transparent information and accordingly set debt-contracting terms more sensitive to the transparency of corporate information. Because corporate information is perceived to be more opaque and less credible when controlling families are more likely to expropriate outside investors (Leuz et al., 2003), creditors may require higher returns on their lending to compensate for the higher risk.

On the other hand, when controlling families' perceived probability of expropriation is low, creditors are less concerned about being expropriated. Therefore, creditors have a lower demand for transparent information; consequently their lending terms, including the required returns, are likely to be less tied to the transparency of corporate information. In other words, corporate information opacity matters more when potential agency conflicts between controlling families and creditors are more severe. Formally, the second hypothesis is:

H2: The impact of corporate opacity on the relationship between family control and the cost of debt is stronger when the perceived expropriation potential by controlling shareholders is greater.

3.3 Sample, data, and statistics

3.3.1 Sample selection and data sources

The initial sample consists of all privately controlled (i.e., the ultimate largest shareholder is not a state-owned enterprise or a government agency) nonfinancial A-share issuing firms listed on either the Shanghai Stock Exchange or the Shenzhen Stock Exchange between 2004 and 2010. There were substantial changes in accounting standards in 2003; therefore, I

choose 2004 as my sample beginning year mainly to maintain certain consistence in the treatment of accounting items used in my analysis.

I first exclude firms in which the ultimate largest shareholder is a foreign entity and firms that are cross-listed overseas, as foreign accounting rules may affect the treatment of some accounting items used in this study. I then delete observations for the first year of public listing, as an IPO may affect at least three of the four components of the corporate opacity index used in this study: analyst coverage, trading volume, and stock return volatility (Rajan and Servaes, 1997; Cliff and Denis, 2004; Ellis, 2006). After deleting observations with missing data, the final sample consists of 705 firms and 3320 firm-year observations.

I obtain accounting and financial data from the China Securities Market and Accounting Research (CSMAR) database. Compiled by Shenzhen GTA Information Technology Company Ltd., CSMAR is one of the most widely used databases for research on the Chinese stock market. Data used to construct the corporate opacity index is also from CSMAR. I winsorize all continuous variables used in the multivariate tests at the 1% and 99% level to minimize the impact of outliers.

3.3.2 Measurement of variables

3.3.2.1 Cost of debt

Some prior studies (e.g., Anderson et al., 2003; Ellul et al., 2007; Boubakri and Ghouma, 2010) measure the cost of debt as the spread between corporate bond yield and a benchmark (e.g., U.S. treasury yield or LIBOR). The corporate bond market, however, is underdeveloped in China and many other emerging economies. Therefore, I follow Pittman and Fortin (2004),

Kim et al. (2011), and Sanchez-Ballesta and Garcia-Meca (2011) to measure a firm's cost of debt as its interest expense for the year divided by the average short-term and long-term debt during the year.¹⁴

Chinese public firms do not always explicitly disclose interest expense in their income statements; rather they integrate interest expense into an accounting item called "financial expense", which includes interest expense, interest income, profit and loss on foreign exchanges, and various fees and charges by financial institutions. Most firms disclose the breakdown of "financial expense" in the notes to income statements. I therefore manually collect the data of interest expense by checking the notes and drop those firm-year observations that do not disclose interest expense either in the income statements or in the notes to the income statements.

3.3.2.2 Key independent variables

3.3.2.2.1 Family firms

Despite the extant literature on family firms, there is no universally accepted definition of family firms (See Prencipe et al. (2014) for an extensive review). Because of concentrated ownership in many European and East Asian countries, researchers commonly apply a minimum threshold for the largest shareholders' ownership to ensure effective control (Fan and Wong, 2002; Dyck and Zingales, 2004). In this study, I use a dummy variable (*Family dummy*) to denote a family firm if: (1) the founder and members of the founding family

¹⁴ Using interest expenses as the proxy for cost of debt may itself subject to management's "opacity decision". I address this issue in the robustness test in section 4.5.

(either by blood or through marriage) hold at least 20% of the firm's control rights; *and* (2) the founding family (all family members combined) is the ultimate largest shareholder.¹⁵

In addition to the criteria above I also apply some other rules in determining a family firm, given the unique characteristics of the Chinese markets. First, unlike in the U.S., where almost all family firms are in the hands of second or later generations (Ellul et al., 2007), founders are still in control in the vast majority of publicly listed family firms in China. While Fan et al. (2012) define such firms as entrepreneurial firms, I still regard these firms as family firms to maintain consistence with most other studies. Second, if a firm is established by more than one family, I regard the family with the largest control rights as the controlling family.

Third, natural persons were not allowed to own or control a business until some years after the start of the economic reform; until then many businesses were registered as village and town enterprises (VTEs) even they were founded and controlled by natural persons. These firms were later re-registered as private enterprises when it's permitted by the new laws. In those cases these firms are regarded as family firms if they meet the two criteria of my family firm definition (i.e., ultimate largest shareholder with at least 20% control rights). In some other cases, managers of VTEs later become the controlling shareholders through management buyouts. I view these firms as nonfamily firms even if the controlling

¹⁵ Of the 3320 firm-year observations, 1092 satisfy the definition of family firms. If I relax the definition by removing the 20% threshold for control rights, the number of family firms increases to 1210. As an additional test, I run all regressions using this alternative definition. My main results remain qualitatively unchanged. If I remove the second criterion, the number of family firms remains the same. In other words, when the founding family holds at least 20% of control rights, no other blockholders hold more than 20% control right. This also implies that concentration of equity ownership is even higher in family-controlled firms.

shareholders have more than 20% of control rights, to be consistent with prior literature (e.g., Ellul et al., 2007; Fahlenbrach, 2009).

As in prior literature, I also use a continuous variable (*Family ownership*) to measure family ownership, which is the fractional equity ownership of the founding family if a firm is classified as a family firm and zero for all nonfamily firms.

3.3.2.2.2 Corporate opacity

Following Anderson et al. (2009), I develop a corporate opacity index that ranks the relative opacity of each firm-year observation. My corporate opacity index consists of four components, namely, trading volume, analyst coverage, proportion of zero-return trading days, and stock return volatilities. The intuitions drawn from these corporate information opacity proxies are well known. I provide a brief elaboration on them.

Investors are more willing to buy or to sell a company's shares when there is less information asymmetry. Thus, trading volume is an inverse proxy for information opacity (Leuz and Verrecchia, 2000). I measure trading volume as the average daily number of shares traded divided by the average total number of shares outstanding during the year. Financial analysts play an important role as informational intermediaries between the firm and the market (Lang et al., 2004). The larger the number of financial analysts following a firm, the more intensive the firm's financial information is under market scrutiny. I measure analyst coverage as the natural logarithm of the number of financial analysts following the firm.

The third proxy for corporate opacity is the proportion of zero-return trading days over the year. Lesmond et al. (1999) argue that the incidence of zero daily return is a liquidity measure that captures the relative value of information signals to the trading costs. They find that the proportion of zero-return trading days for NYSE/AMEX stocks is highly correlated to the bid-ask spread, a well-known proxy for information asymmetry. More recently Bekaert et al. (2007) suggest that this measure is particularly useful for emerging markets where detailed transaction data is often not available and is of relatively poor quality. The final proxy for information opacity is the volatility of daily stock returns. Lang and Lundholm (1993) suggest that the level of stock price volatility is negatively related to information asymmetries between the firm and investors. I measure volatility as the standard deviation of daily stock returns (dividend adjusted) during the year.

To construct the corporate opacity index, I first calculate the abovementioned four individual components of opacity. I next rank each of these four components into deciles, with a value of 9 representing the most opaque firms and a value of 0 representing the least opaque firms. As a result, I obtain a new set of variables, Rankvolume, Rankanalyst, Rankzeroreturn, and Rankvolatility. I then sum these four components and divide it by a factor of 36, which is the maximum possible value. This process yields a corporate opacity index that ranges from 0 to 0.9, with higher values indicating greater information opacity.

$$Opacity\ index = \frac{Rankvolume + Rankanalyst + Rankzeroreturn + Rankvolatility}{36}$$

3.3.2.3 Control variables

Firm characteristics other than ownership structure and corporate opacity may also affect a firm's cost of debt. Consistent with the literature (e.g., Petersen and Rajan, 1994; Anderson et

al., 2003; Pittman and Fortin, 2004; Lin et al., 2011), I include a set of firm characteristics as control variables in the regressions. These control variables are firm size, the ratio of fixed assets, debt ratio, a dummy indicating negative equity, current ratio, operating cash flows, sales growth, board size, and the ratio of outside directors. Theoretical and empirical evidence on the impacts of these variables on the cost of debt is relatively well-known. Detailed descriptions of all variables used in this study are provided in Table 3.1. To minimize the influence of extreme values, all continuous variables are winsorized at the 1% and 99% level.

I also include year and industry dummy variables in the multivariate OLS analyses. Industry dummy variables are based on the classification system published by the China Securities Regulatory Commission (CSRC), which classifies all listed firms into 13 broad industries (12 industries if the financial service industry is excluded).

3.3.3 Descriptive statistics

Panel A and Panel B of Table 3.2 report the distribution of family firms and nonfamily firms by year and industry, respectively. Panel A shows that the number and percentage of family firms rose steadily, except for a small drop in percentage term between 2005 and 2006. In 2004, the Chinese government established the Small and Medium Enterprise Board (SMEB) under the Shenzhen Stock Exchange. A large proportion of all IPOs on the SMEB were family firms. Family firms represented about 32.9% of all firm-year observations in the sample. The percentage of family firms increased to 42.7% as of the end of 2010, from about 22.5% in 2004. This highlights the importance of studying the relationship between family firms and the cost of debt.

Panel B shows a significant variation in the number and the percentage of family firms across industries. The manufacturing industry had by far the largest number of family firms, reflecting the fact that it also represented the largest industry by the total number of listed firms. Also notable was the fact that there was no family firm in the power, gas, and water supply industry. This is not surprising, given that this is a highly regulated industry monopolized by newly privatized former state-owned enterprises (SOEs).

Table 3.3 provides descriptive statistics, broken down by family firms and nonfamily firms. Family firms on average pay a significantly lower cost of debt (0.577 percentage points or about 10% lower) than nonfamily firms. The difference is significant at the 1% level. The opacity index is 0.427 for family firms and 0.446 for nonfamily firms, with a difference of 0.019 or about 4.5%, which is also significant at the 1% level.

Family firms are, on average, significantly larger than nonfamily firms. Compared with nonfamily firms, family firms have a significantly lower PPE ratio, which may imply that family firms invest more in R&D and are more interested in the long-term growth of the firms than nonfamily firms. Family firms have a significantly lower debt ratio but a higher current ratio relative to nonfamily firms, indicating that family firms prefer a low-risk capital structure and are more concerned about their ability to service short-term debt. Family firms also have a higher ratio of outside directors than nonfamily firms, which may imply that family firms have better internal corporate governance. I do not find a significant difference in cash flow performance, sales growth, and board size between family and nonfamily firms.

To summarize, family firms and nonfamily firms differ significantly in their cost of debt and corporate opacity. They also differ in firm size, capital structure, investment, and internal

corporate governance. I next formally assess how these factors affect the difference in the cost of debt between these two groups of firms.

Table 3.1 Descriptions of main variables used in the analyses

Variable	Description
Dependent variables:	
Cost of debt	Interest expense for the year divided by the average of short-term and long-term debt during the year
Key independent variables:	
Family ownership	The fractional equity ownership by the family if a firm is classified as a family firm; zero for all nonfamily firms
Family dummy	A dummy variable that equals 1 if both of the conditions are met: (1) the founder and his family members hold at least 20% of the firm's control rights; and (2) the founding family (all family members combined) is the ultimate largest shareholder.
Opacity index	An opacity index constructed to measure corporate information opacity. The opacity index ranks four components, <i>trading volume</i> , <i>analyst coverage</i> , <i>zero-return trading days</i> , and <i>stock return volatility</i> in deciles (from 0 to 9) and divides the sum of the four components by 36, resulting in an opacity index between 0 and 0.9. A higher value of opacity index indicates that a firm's information is more opaque
Trading volume	Average daily number of shares traded during the year divided by the average number of total shares outstanding during the year
Analyst coverage	The number of equity analysts following each firm
Zero-return days	Proportion of zero daily returns over the number of trading days during the year
Stock return volatility	Standard deviation of daily stock returns (dividend-adjusted) during the year
Borrowing firm characteristics:	
Firm size	The natural logarithm of total assets
PPE	Net property, plant, and equipment divided by total assets
Debt ratio	The sum of short-term and long-term debt divided by total assets
Current ratio	Current assets divided by current liabilities
Cash flow	Operating cash flow divided by total assets
ROA	Earnings before interest and taxes (EBIT) divided by total assets
Sales growth	Total sales revenues in the current year minus total sales revenues in last year divided by total sales revenues in the last year
Negative equity	A dummy variable that equals 1 if the firm reports negative equity; zero otherwise
Board size	The natural logarithm of the total number of directors on the board
Outside directors	The number of outside directors divided by total number of board directors
Wedge	The difference between the controlling shareholder's control rights and cash flow rights
Political connection	A dummy variable that equals 1 if either the Chairman or the CEO is politically connected; zero otherwise
Institutional variables:	
Market development	An index that measures the overall level of marketization in the province in which a firm is headquartered. Higher index values indicate higher level of marketization.
Property protection	An index that measures the level of legal protection of property rights in the province in which a firm is headquartered. Higher index values indicate higher level of legal protection.
Instrumental variables	
Personal name	A dummy variable that equals 1 if the name of the firm at the time of IPO contains (part of) personal name(s) related to the founder(s)
Multiple founders	A dummy variable that equals 1 if the firm has more than one founder

Table 3.2 Distribution of firm-year observations

A firm is defined as a family firm if both of these two conditions are met: (1) the founder and his family members hold at least 20% of the firm's control rights; and (2) the founding family (all family members combined) is the ultimate largest shareholder.

Panel A Number and percentage of firm-year observations by year

Year	All firms	Family firms	Nonfamily firms	Percentage of family firms (%)
2004	334	75	259	22.5
2005	394	103	291	26.1
2006	423	105	318	24.8
2007	456	130	326	28.5
2008	515	186	329	36.1
2009	577	228	349	39.5
2010	621	265	356	42.7
Total	3320	1092	2228	32.9

Panel B Number and percentage of firm-year observations by industry

Industry code	Industry description	All firms	Family firms	Nonfamily firms	Percentage of family firms (%)
A	Agricultural, forestry, livestock & fishery	89	38	51	42.7
B	Mining	24	6	18	25.0
C	Manufacturing	1963	736	1227	37.5
D	Power, gas & water production & supply	34	0	34	0
E	Construction	64	28	36	43.8
F	Transport & storage	33	9	24	27.3
G	Information technology	276	135	141	48.9
H	Wholesale & retail trade	208	21	187	10.1
J	Real estate	316	69	247	21.8
K	Social services	97	15	82	15.5
L	Communication & cultural industry	9	4	5	44.4
M	Comprehensive	207	31	176	15.0
	Total	3320	1092	2228	32.9

Table 3.3 Means, medians, standard deviations and univariate tests of differences in means and medians between family firms and nonfamily firms

Variables include cost of debt, corporate information opacity index, and borrowing firm characteristics. All variables are defined in Table 3.1. Significances are based on *p*-values using the two-tailed t-test for mean (Mann-Whitney-Wilcoxon test for median). *, ** and *** indicate significance at the 10%, 5% and 1% levels, respectively.

Variables	All firms		Family firms		Nonfamily firms		Diff. in means (3) – (5)	Diff. in medians (4) – (6)
	(1)	(2)	(3)	(4)	(5)	(6)		
	Mean	Median	Mean	Median	Mean	Median		
Dependent variables								
Cost of debt (%)	5.705	5.662	5.318	5.202	5.895	5.876	-0.577***	-0.674***
Key independent variables								
Family ownership	0.105	0	0.318	0.293	0	0	0.318***	0.293***
Family dummy	0.329	0	1	1	0	0	1.000***	1.000***
Opacity index	0.440	0.450	0.427	0.425	0.446	0.450	-0.019***	-0.025***
Other control variables								
Total assets (RMB millions)	2342	1302	2744	1482	2144	1204	600***	278***
Firm size	21.012	20.987	21.245	21.115	20.903	20.906	0.342***	0.209***
PPE	0.254	0.232	0.240	0.224	0.261	0.236	-0.021***	-0.012**
Debt ratio	0.595	0.502	0.451	0.447	0.665	0.535	-0.214***	-0.088***
Current ratio	1.798	1.261	2.105	1.498	1.647	1.155	0.458***	0.343***
Cash flow	0.046	0.046	0.048	0.051	0.045	0.044	0.003	0.007
Sales growth	0.285	0.137	0.277	0.195	0.289	0.105	-0.012	0.090***
ROA	0.028	0.023	0.024	0.022	0.030	0.023	-0.006**	-0.001
Negative equity	0.048	0	0.007	0	0.068	0	-0.061***	0
Board size	2.147	2.197	2.142	2.197	2.149	2.197	-0.007	0
Outside directors	0.363	0.333	0.366	0.333	0.361	0.333	0.005***	0
wedge	0.091	0.074	0.074	0.040	0.099	0.087	-0.025***	-0.047***
No. of firm-year obs.	3320		1092		2228			

3.4 Multivariate results

3.4.1 Impact of family control on the cost of debt

In Section 3.2.1, I propose that the negative relationship between family ownership and the cost of debt documented in Anderson et al. (2003) may not hold for the Chinese market. To test this conjecture, I estimate the following ordinary least square regression model, which makes my results directly comparable with prior empirical evidence:

$$\begin{aligned} \text{Cost of debt} = & \alpha + \beta_1 \text{Family firm (Family ownership or Family dummy)} \\ & + \beta_2 \text{Control variables} + \text{Year dummies} + \text{Industry dummies} + \varepsilon \end{aligned}$$

Equation (3.1)

Standard errors of the OLS regression results reported in column 1 and column 3 of Table 3.4 are corrected for firm-level clustering.¹⁶ The coefficient of *Family ownership* and *Family dummy* is -1.480 and -0.377, respectively, both statistically different from zero at the 1% level. The results confirm the univariate differences reported in Table 3.3 that family control is associated with a lower cost of debt. The findings here and in Anderson et al. (2003) suggest that family firms enjoy lower costs of debt both in China and the U.S., despite the immense difference in investor protection and other institutions. However, my results seem to be inconsistent with the findings documented in Ellul et al. (2007), which would suggest that family firms in China suffer from higher debt cost than nonfamily firms. This motivates us to examine other factors (rather than country-level institutions) that may affect the relationship between family control and the cost of debt.

¹⁶ As a robustness check, I adjust standard errors for clustering at the firm and the year level (Petersen, 2009), which controls for both heteroscedasticity and within-firm serial correlation. My findings are robust to the two-way clustering.

Table 3.4 Family firms and the cost of debt

This table reports regression results of cost of debt on family firms. Columns 1 and 3 use ordinary least squares (OLS) estimation and columns 2 and 4 use firm-fixed estimation. The dependent variable is the cost of debt in all models. All variables are defined in Table 3.1. Standard errors corrected for firm-level clustering are reported in brackets. *, **, and *** indicate significance at the 10%, 5% and 1% levels, respectively.

	Dependent variable: Cost of debt			
	OLS (1)	Firm-fixed effects (2)	OLS (3)	Firm-fixed effects (4)
Constant	0.682 [2.250]	2.392 [2.809]	0.772 [2.265]	2.240 [2.812]
Family ownership	-1.480*** [0.465]	-1.012** [0.507]		
Family dummy			-0.377*** [0.144]	-0.142** [0.071]
Log assets	-0.146* [0.088]	-0.090 [0.113]	-0.144 [0.089]	-0.093 [0.113]
PPE	3.087*** [0.597]	2.686*** [0.654]	3.148*** [0.603]	2.709*** [0.652]
Debt ratio	0.052** [0.024]	0.049*** [0.019]	0.052** [0.024]	0.049** [0.019]
Current ratio	-0.529*** [0.184]	-0.151 [0.107]	-0.530*** [0.183]	-0.151 [0.107]
Cash flow	-2.538*** [0.601]	0.234 [0.506]	-2.546*** [0.603]	0.254 [0.506]
Sales growth	-0.031 [0.056]	-0.022 [0.041]	-0.034 [0.056]	-0.023 [0.041]
Negative equity	0.738* [0.380]	0.225 [0.323]	0.761** [0.383]	0.228 [0.323]
Board size	-0.294 [0.334]	-0.901** [0.423]	-0.294 [0.335]	-0.903** [0.423]
Outside directors	0.342 [1.166]	-1.162 [1.095]	0.033 [1.158]	-1.126 [1.099]
Year dummies	Yes	No	Yes	No
Industry dummies	Yes	No	Yes	No
No. of obs.	3320	3320	3320	3320
Adjusted <i>R</i> -squared	0.333	0.613	0.331	0.612
<i>F</i> -stat.	18.10***	3.70***	17.75***	3.33***

Except for the estimate of the ratio of outside directors, the OLS coefficients of control variables (columns 1 and 3) have the predicted signs. Specifically, larger (*Firm size*), better performing (*Cash flow*), less risky (*Debt ratio*, *Current ratio*, and *Negative equity*) firms pay a lower cost of debt, relative to smaller, worse performing, and riskier firms. The OLS results, however, suggest no significant effect of a firm's growth, board size, and the ratio of outside directors on its cost of debt. The OLS results for the control variables reported in Table 3.4 are similar to those in prior studies (e.g., Petersen and Rajan, 1994; Anderson et al., 2003; Pittman and Fortin, 2004).

There is, however, a concern that some firm-specific variables may be omitted, which causes the OLS results to be biased. Nikolaev and van Lent (2005) suggest that fixed effects estimations reduce endogeneity bias. I therefore use fixed effects model to correct for unspecified heteroskedasticity, which takes into account heterogeneity among individual firms. The results are reported in column 2 and column 4 of Table 3.4. The coefficients of *Family ownership* and *Family dummy* remain negative and statistically different from zero (albeit with lower significances), confirming the OLS results reported in columns 1 and 3. Overall, the results in Table 3.4 provide evidence that family control on average is associated with lower costs of debt in China.

In all subsequent analyses, I present just the results on family ownership for brevity purpose. Results are similar when I use the family control dummy. The constant term and control variables are also included in all regressions but their coefficients are not reported.¹⁷

¹⁷ However, those results are available on request.

3.4.2 Impact of corporate opacity on the relationship between family control and the cost of debt

3.4.2.1 Primary test of Hypothesis H1

I point out in Section 3.2.2.1 that entrenched controlling shareholders tend to supply relatively more opaque information to outside investors. Consequently the negative effect of family control on the firm's cost of debt is expected to be weaker when corporate opacity is relatively higher. To examine this proposition, I carry out two sets of tests.

I first divide the full sample into two subsamples based on the level of corporate opacity. Low-opacity firms are defined as those for which the opacity index is below the sample median. High-opacity firms are defined as those for which the opacity index is above the sample median. For each of these two subsamples, I then rerun the baseline regression model described in Equation 1. The results are reported in Table 3.5. Second, to explicitly examine the joint effect of corporate opacity and family control on the cost of debt, I estimate the following OLS model as well as the corresponding firm-fixed effects model:

$$\begin{aligned} \text{Cost of debt} = & \alpha + \beta_1 \text{Family firm (Family ownership or Family dummy)} \\ & + \beta_2 \text{Opacity index} + \beta_3 \text{Family firm} * \text{Opacity index} \\ & + \beta_4 \text{Control variables} + \text{Year dummies} + \text{Industry dummies} + \varepsilon \end{aligned}$$

Equation (3.2)

The results for regressions based on Equation 3.2 are reported in Table 3.6.

Table 3.5 Family firms and the cost of debt (subsample analyses)

This table reports regression results of cost of debt on family firms, for the low-opacity subsample (columns 1 and 2) and high-opacity subsample (columns 3 to 4). Columns 1 and 3 use OLS estimation and columns 2 and 4 use firm-fixed estimation. The dependent variable is cost of debt in all models. Low-opacity firms are defined as those for which the opacity index is below the sample median. High-opacity firms are defined as those for which the opacity index is above the sample median. All variables are defined in Table 3.1. Standard errors corrected for firm-level clustering are reported in brackets. *, **, and *** indicate significance at the 10%, 5% and 1% levels, respectively.

	Dependent variable: Cost of Debt			
	Low-opacity subsample		High-opacity subsample	
	OLS (1)	Firm-fixed effects (2)	OLS (3)	Firm-fixed effects (4)
Family ownership	-2.061*** [0.546]	-1.037** [0.523]	-0.463 [0.531]	-0.745 [1.720]
Constant and control variables	Yes	Yes	Yes	Yes
Year and industry dummies	Yes	No	Yes	No
No. of obs.	1779	1779	1541	1541
Adjusted <i>R</i> -squared	0.343	0.734	0.368	0.546
<i>F</i> -stat.	14.95***	2.95***	14.48***	2.63***

Table 3.6 Family firms, corporate opacity, and the cost of debt

	Dependent variable: Cost of Debt	
	OLS (1)	Firm-fixed effects (2)
Family ownership	-3.182*** [1.011]	-1.634*** [0.706]
Family ownership * Opacity index	4.527** [2.012]	0.763** [0.351]
Opacity index	1.091** [0.479]	2.082** [0.929]
Constant and control variables	Yes	Yes
Year and industry dummies	Yes	No
No. of obs.	3320	3320
Adjusted <i>R</i> -squared	0.339	0.615
<i>F</i> -stat.	17.54***	3.79***

Columns 1 and 2 of Table 3.5 report the Equation 3.1 regression results for the subsample with relatively low opacity. The coefficient of *Family ownership* is negative and significant at either the 1% level (coef. = -2.061 in column 1) or the 5% level (coef. = -1.037 in column 2). The result is similar to that in Table 3.4 but with larger coefficients. However, the coefficient of *Family ownership* is insignificant (albeit with a negative sign) in columns 3 and 4, which represent the relatively more opaque subsample. Cross-equation restriction tests show that the coefficients of *Family ownership* in these two sub-samples are significantly different (p -value = 0.003 for columns 1 and 3; p -value = 0.018 for columns 2 and 4). To appreciate the economic significance of my findings, consider the coefficients reported in columns 1 and 3 of Table 3.5. When corporate opacity is below median (column 1) a one-standard-deviation increase in family ownership (an increase of about 18%) reduces debt cost by 0.373 percentage points. However, when corporate opacity is above the median (column 3) a one-standard-deviation increase in family ownership (about 17%) lowers debt cost by only about 0.077 percentage points.¹⁸ The results in Table 3.5 provide clear evidence that the negative impact of family ownership on the cost of debt is stronger when corporate opacity is relatively low.

In Equation 3.2 I extend the baseline model in Equation 3.1 by adding the interaction term between family firm and corporate opacity. Both models in Table 3.6 show that, as expected, the coefficient of the stand-alone *Family ownership* remains negative and statistically significant, suggesting that when corporate opacity equals zero family firms enjoy lower

¹⁸ The statistics summary shows that in the low opacity sub-sample, a one standard deviation increase in family ownership represents 18% increase. To calculate the increase in the cost of debt, we multiply 18% by the absolute mean impact of family ownership on the cost of debt (i.e., 2.061 from Table 3.5), that is $0.18 \times 2.061 = 0.373$. Similarly, in the high-opacity sub-sample, the corresponding figure is $0.17 \times 0.463 = 0.077$.

costs of debt than nonfamily firms. The coefficient of the interaction term *Family ownership* * *Opacity index* is positive and significant, opposite the sign of the stand-alone *Family ownership*. The opposite signs mean that as corporate opacity increases the negative impact of family ownership on the cost of debt becomes weaker.

Taken together, the results in Table 3.5 and Table 3.6 indicate that when corporate opacity is zero, family firms enjoy significantly lower costs of debt than nonfamily firms. However, as corporate opacity increases the difference in the cost of debt becomes insignificant. These results provide strong support to hypothesis **H1** that the relationship between family control and the cost of debt is affected by corporate opacity. Specifically, the negative impact of family control on the cost of debt becomes weaker as corporate opacity increases.

3.4.2.2 Endogeneity of family control

There is one potential endogeneity concern about the results for the relationship between family firms and the cost of debt and for the moderating role of corporate opacity on such a relationship. In particular, I explicitly assume the causality running from family control (or family ownership) to a lower cost of debt. However, it is also possible that there is an inverse causality. Specifically, a lower cost of debt indicates better firm performance, *ceteris paribus*. It is intuitive to argue that founding families are more likely to retain control when their firms perform well.

I address this potential endogeneity issue in this section with the instrumental variable (IV) approach. An appropriate IV needs to satisfy two conditions. First, the IV needs to be exogenous in the main regressions. Second, the IV must be correlated to the endogenous variable, conditional on other covariates. Following Fahlenbrach (2009), the first IV

(*Personal name*) is a dummy variable that equals 1 if the name of the firm at the time of IPO contains at least part of the personal name(s) of the founder(s). There is no reason to believe that the name of a firm at the time of IPO is related to its current cost of debt. It is however reasonable to assume that a firm still bearing the name(s) of the founder(s) at IPO is more likely to be a family-controlled firm. Thus, the first IV satisfies both conditions for an appropriate IV. Following Adams et al. (2009), the second IV (*Multiple founders*) is a dummy variable that equals 1 if the firm has more than one founder (from different families). There is no systematic evidence that whether a firm has more than one founder has a direct effect on its cost of debt. But it is also reasonable to believe that a firm is more likely to remain controlled by one of the founders if it was founded by more than one founder. Thus, the second IV also meets both conditions.

In estimating IV regressions, I employ the full sample with interaction terms of family ownership and corporate opacity. If family ownership is endogenous, then it's likely that the interaction between family ownership and corporate opacity, which is an exogenous variable, is subject to endogeneity concern too (Kelejian, 1971). Therefore, I model *Family ownership* and *Family ownership*Opacity index* as endogenous variables and estimate a two-stage least squares regression model.

The IVs are *Personal name*, *Multiple founders*, *Personal name*Opacity index*, and *Multiple founders*Opacity index*. In the first stage, each endogenous variable is regressed on IV and control variables. The F-statistics in the first stage (unreported but available on request) indicate that the coefficients of *Personal name* and *Multiple founders* are significantly different from zero at the 1% level, providing further support for the validity of these two IVs. In the second stage, the predicted values from the first stage regressions are used as key

independent variables. Table 3.7 reports the second-stage regression results with the cost of debt as the dependent variable.

As can be seen, the coefficients of *Family ownership* and *Family ownership*Opacity index* have the same sign as those corresponding coefficients in Table 3.6, but with even larger magnitudes. For example, the coefficient of *Family ownership* and *Family ownership*Opacity index* in column 1 of Table 3.7 is -6.091 and 8.070, respectively, compared to -3.182 and 4.527 in column 1 of Table 3.6. Thus, the results from the IV regressions are consistent with my earlier analyses and support hypothesis **H1** that corporate opacity weakens the negative impact of family control on the cost of debt. This finding is robust to controlling for potential endogeneity concerns.

3.4.3 Other factors influencing the role of corporate opacity on the relationship between family control and the cost of debt

In this section, I aim to explore some factors that influence the mechanism through which corporate opacity affects the relationship between family control and the cost of debt. In particular, I focus on factors that are related to the potential incentives of dominant controlling families to expropriate outside investors, because such incentives directly impact creditors' demand for transparent corporate information and consequently the sensitivity of the relationship between family control and the cost of debt to corporate opacity (refer to the discussion in Section 3.2.2.2).

Specifically, I examine how the moderating effect of corporate opacity is affected by the following factors: the divergence between controlling families' control rights and cash flow

rights (i.e., control-ownership wedge), external institutions (market development and property rights protection), and firms' political connection.

Table 3.7 Family firms, corporate opacity, and the cost of debt (instrumental variables estimations)

This table presents instrumental variable regressions of cost of debt on family firms and on the interaction between family firms and corporate opacity. Column 1 uses OLS estimation and column 3 uses firm-fixed estimation. Both the stand-alone *Family ownership* and the interaction term *Family ownership*Opacity index* are instrumented. The IVs in the first stage are *Personal name*, *Personal name*Opacity index*, *Multiple founders*, and *Multiple founders*Opacity index*. *Personal name* is a dummy variable that equals 1 if the name of the firm at the time of IPO contains a personal name related to the founder(s). *Multiple founders* is a dummy variable that equals 1 if the firm has more than one founder, i.e., founders from different families. All other variables are defined in Table 3.1. Standard errors corrected for firm-level clustering are reported in brackets. *, **, and *** indicate significance at the 10%, 5% and 1% levels, respectively.

	Dependent variable: Cost of Debt	
	OLS (1)	Firm-fixed effects (2)
Family ownership	-6.091*** [2.311]	-9.081*** [1.819]
Family ownership * Opacity index	8.070*** [2.225]	8.542*** [2.841]
Opacity index	1.593*** [0.418]	0.723** [0.302]
Log Assets	-0.208** [0.096]	-0.018 [0.113]
PPE	2.925*** [0.592]	2.686*** [0.656]
Debt ratio	0.053** [0.024]	0.042** [0.020]
Current ratio	-0.514*** [0.186]	-0.150 [0.107]
Cash flow	-2.287*** [0.589]	-0.051 [0.512]
Sales growth	-0.037 [0.057]	-0.010 [0.042]
Negative equity	0.733* [0.395]	0.092 [0.329]
Board size	-0.244 [0.337]	-0.726* [0.418]
Outside directors	1.117 [1.211]	-1.804* [1.006]
Year and industry dummies	Yes	No
No. of obs.	3320	3320
Adjusted R-squared	0.334	0.615
F-stat.	18.21***	6.75***

3.4.3.1 Control-ownership wedge

Previous studies show that for many firms around the world the ultimate largest shareholders exercise effective control over the firms with a relatively small equity ownership (Claessens et al., 2000; Faccio and Lang, 2002), resulting in a divergence between the ultimate largest shareholders' control rights and cash flow rights. In the presence of the control-ownership wedge, controlling shareholders have a greater incentive and ability to expropriate outside investors, which often causes a firm's value to be discounted (Shleifer and Vishny, 1997; Johnson et al., 2000; Claessens et al., 2002; Villalonga and Amit, 2006).

Consistent with this view, Boubakri and Ghouma (2010) and Lin et al. (2011) find that the cost of debt financing is significantly higher for firms with wider control-ownership wedges, especially when the ultimate largest shareholders are families. As a result, creditors have a greater incentive to monitor firms with higher wedges to ensure their investments are not expropriated by the controlling shareholders. Consequently, the relationship between family firms and the cost of debt is expected to be more sensitive to corporate opacity when the control-ownership wedge is high. In other words, the joint effect between family firms and corporate opacity is expected to be stronger for firms with a higher wedge.

To test this proposition, I divide the full sample into low-wedge and high-wedge subsamples. The low-wedge subsample contains those firms that have a control-ownership wedge below the sample median; the high-wedge subsample contains those firms with a control-ownership wedge above the sample median. I then repeat the testing in Equation 3.2 for each subsample. The results are reported in Table 3.8.

Table 3.8 Control-ownership wedge, family firm, corporate opacity, and the cost of debt

This table presents regression results of cost of debt on family firms and on the interaction between family firms and corporate opacity, for the high-wedge subsample and low-wedge subsample. Columns 1 and 3 use OLS estimation and columns 2 and 4 use firm-fixed estimation. The dependent variable is cost of debt in all models. Wedge is defined as the difference between the ultimate controlling shareholder's control rights and cash flow rights. High-wedge firms are defined as those for which the control-ownership wedge is above the sample median. Low-wedge firms are defined as those for which the wedge is below the sample median. All other variables are defined in Table 3.1. Standard errors corrected for firm-level clustering are reported in brackets. *, **, and *** indicate significance at the 10%, 5% and 1% levels, respectively.

	Dependent variable: Cost of Debt			
	High-wedge subsample		Low-wedge subsample	
	OLS	Firm-fixed effects	OLS	Firm-fixed effects
	(1)	(2)	(3)	(4)
Family ownership	-3.821*** [1.380]	-3.488** [1.695]	-2.425** [1.134]	-1.488** [0.696]
Family ownership * Opacity index	4.183*** [1.484]	5.964*** [1.773]	3.354 [2.641]	-1.197 [2.305]
Opacity index	1.520*** [0.409]	1.489** [0.660]	0.804* [0.431]	0.466 [0.423]
Constant and control variables	Yes	Yes	Yes	Yes
Year and industry dummies	Yes	No	Yes	No
No. of obs.	1660	1660	1660	1660
Adjusted R-squared	0.297	0.670	0.359	0.577
F-stat.	13.10***	3.92***	10.57***	2.41***

As I can see from all four model specifications, the coefficient of the stand-alone *Family ownership* is negative and significantly different from zero, indicating that when corporate opacity is zero family firms have a lower cost of debt than nonfamily firms, regardless of the level of control-ownership wedge. This finding seems to be different from that of Boubakri and Ghouma (2010) and Lin et al. (2011), who find that the positive impact of family ownership on the cost of debt becomes significantly stronger as the control-ownership wedge increases. My explanation is that for Chinese family firms as a whole, controlling families' alignment effect is so dominant over their entrenchment effect that even a high control-ownership wedge does not significantly change the overall negative impact of family control on the firms' cost of debt.

However, the interactive impact of family ownership and corporate opacity on the cost of debt differs significantly between high-wedge firms and low-wedge firms. In firms with high control-ownership wedges (columns 1 and 2), the coefficient of *Family ownership*Opacity index* is positive and significant at the 1% level. By contrast, neither of the coefficients of the interaction terms is significant for firms with low control-ownership wedges (columns 3 and 4). Cross-equation restriction tests show that the coefficients of *Family ownership*Opacity index* in these two sub-samples differ significantly (p -value = 0.008 for columns 1 and 3; p -value = 0.000 for columns 2 and 4).

The results in Table 3.8 therefore support my expectation that the relationship between family ownership and the cost of debt is more sensitive to corporate opacity when the controlling shareholders' control-ownership wedge is relatively high.

I also note that the coefficient of *Opacity index* is positive and significantly different from zero at the 1% or 5% level when controlling shareholders' control-ownership wedge is relatively high (columns 1 and 2); but when the control-ownership wedge is relatively low the coefficient is only marginally significant at the 10% level (column 3) or insignificant (columns 4). Cross-equation restriction tests show that the coefficients of *Opacity index* in these two sub-samples differ significantly (p -value = 0.024 for columns 1 and 3; p -value = 0.071 for columns 2 and 4). These results are consistent with the notion that creditors have a greater demand for transparent information when controlling shareholders' expropriation potential is higher. These results also confirm the empirical evidence in some previous studies such as Lin et al. (2011).

3.4.3.2 Market development and legal protection of property rights

The literature argues that institutional development is important in mitigating agency conflicts and in curbing private benefits of control (Shleifer and Vishny, 1997; La Porta et al., 2000; Dyck and Zingales, 2004). Recent studies also show that external institutions (legal protection of investors in particular) are negatively associated with the cost of debt (Boubakri and Ghouma, 2010; Qi et al., 2010). The analysis in Section 3.2 of this chapter indicates that when controlling families are entrenched, corporate information becomes more opaque and the negative relation between family control and the cost of debt becomes substantially weaker.

In this section, I take advantage of the huge variation in economic and legal development among China's diverse regions to test whether the development of institutions affects the moderating role of corporate opacity on the relationship between family control and the cost

of debt. When external institutions are stronger, it is more difficult or more costly for controlling families (and more broadly, controlling shareholders) to extract private benefits from their control of the firms (Dyck and Zingales, 2004). Thus, in regions with stronger legal protection and more advanced market development, even those controlling families with relatively more opaque information find it difficult or costly to take advantage of corporate opacity to expropriate outside investors. In other words, the moderating effect of corporate opacity on the relationship between family control and the cost of debt is weaker when external institutions are relatively more developed.

The testing in this section is based on Fan et al. (2011), who evaluate a wide range of economic and institutional factors in China and construct a range of indices to measure these factors at the provincial level. The indices are available up to 2009 at the time I was developing this chapter. Therefore, the sample period is 2004–2009 in this section. I focus on two indices obtained from Fan et al. (2011) as proxies for institutional development at the provincial level. Market development is an index that measures the overall level of marketization of the province in which a firm is headquartered. A higher market development index value indicates a higher level of marketization. Property rights protection is an index that measures the level of legal protection of property rights in the province in which a firm is headquartered, with a higher index value indicating a higher level of legal protection.

As in Section 3.4.3.1, I divide the full sample into two subsamples, based on whether the level of market development and property rights protection is below or above the sample median, respectively. I report the testing results in Table 3.9, with Panel A using market development as the proxy for external institution and Panel B using property rights as the proxy for external institutions, respectively.

Table 3.9 External institutions, family firms, corporate opacity, and the cost of debt

This table presents regression results of cost of debt on family firms and on the interaction between family firms and corporate opacity, subject to market development (Panel A) and property protection (Panel B). Columns 1 and 3 use OLS estimation and columns 2 and 4 use firm-fixed estimation. The sample period in this table is 2004–2009, for which the market development index and property protection index are available. Market development (property protection) is an index that measures the overall level of marketization (property rights protection) of the province in which a firm is headquartered (Fan et al., 2011). Higher index values indicate higher level of marketization (or property protection). High-market-development (High-property-protection) firms are defined as those headquartered in provinces for which the market development (property protection) index is above the sample median. Low-market-development (Low-property-protection) firms are defined as those headquartered in provinces for which the market development (property protection) index is below the sample median. All other variables are defined in Table 3.1. Standard errors corrected for firm-level clustering are reported in brackets. *, **, and *** indicate significance at the 10%, 5% and 1% levels, respectively.

Panel A

	Low-market-development subsample		High-market-development subsample	
	OLS	Firm-fixed effects	OLS	Firm-fixed effects
	(1)	(2)	(3)	(4)
Family ownership	-3.604*** [1.330]	-4.803*** [1.536]	-1.166** [0.544]	-1.006** [0.463]
Family ownership * Opacity index	8.745** [4.040]	10.084*** [3.653]	-0.418 [1.858]	-1.746 [2.316]
Opacity index	1.190** [0.558]	1.448** [0.660]	0.927* [0.522]	0.411 [0.502]
Constant and control variables	Yes	Yes	Yes	Yes
Year and industry dummies	Yes	No	Yes	No
No. of obs.	1346	1346	1353	1353
Adjusted <i>R</i> -squared	0.238	0.617	0.515	0.751
<i>F</i> -stat.	9.88***	21.65***	14.46***	2.24***

Panel B

	Low-property-protection subsample		High-property-protection subsample	
	(1)	(2)	(3)	(4)
Family ownership	-3.453** [1.599]	-4.318** [2.141]	-1.265*** [0.454]	-1.651** [0.811]
Family ownership * Opacity index	8.258** [3.703]	9.693*** [2.557]	0.091 [1.016]	-1.333 [1.505]
Opacity index	1.372*** [0.534]	1.441** [0.692]	0.845 [0.545]	0.486* [0.291]
Constant and control variables	Yes	Yes	Yes	Yes
Year and industry dummies	Yes	No	Yes	No
No. of obs.	1342	1342	1357	1357
Adjusted <i>R</i> -squared	0.253	0.614	0.457	0.753
<i>F</i> -stat.	11.34***	21.35***	5.91***	2.55***

In the weak-institutions subsample (columns 1 and 2), the coefficients of *Family ownership*Opacity index* are all positive and significant at either the 1% or 5% level, indicating that in regions with weak institutions, high corporate opacity significantly weakens the negative impact of family control on the cost of debt. However, the moderating effect of corporate opacity becomes insignificant in regions with relatively strong institutions, which is proved by the insignificant coefficient of *Family ownership*Opacity index* in column 3 and column 4.

I compare four pairs of coefficients of the interaction term (columns 1 and 3, and columns 2 and 4 in Panel A and Panel B, respectively) using the cross-equation restriction tests. Among them the coefficients in columns 2 and 4 of Panel B differ at the 5% level (p -value = 0.014); all other pairs of coefficients differ significantly at the 1% level.

Taken together, the results in this section support my proposition that the moderating effect of corporate opacity is stronger when external institutions are weaker. I also note that in all models in Table 3.9, the stand-alone coefficients of *Family ownership* is negative and significantly different from zero, indicating that when corporate opacity is zero family firms pay a lower cost of debt than nonfamily firms, regardless of the strength of external institutions.

This finding seems to be different from that of Ellul et al. (2007), who find that family firms pay a lower (higher) cost of debt than nonfamily firms in countries with strong (weak) legal protection of investors. The results suggest that firm-level corporate opacity may play a more important role than country-level external institutions in explaining the actual impact of family control on the cost of debt.

Similar to the result in Table 3.8, the coefficient of the stand-alone *Opacity index* is significantly positive when market development or property rights protection is low (columns 1 and 2 in Table 3.9); while the coefficient is generally less significant in situations with relatively high market development or strong property rights protection (columns 3 and 4). The coefficients of *Opacity index* in these two sub-samples are significantly different (columns 1 and 3 in Panel A have the largest p -value = 0.068). The results provide further empirical support to my earlier analysis that corporate opacity matters more for the cost of debt when controlling shareholders are more likely to expropriate outside investors.

3.4.3.3 Firms' political connections

A number of studies examine the implication of political connection for controlling shareholders' incentives to expropriate outside investors. Faccio et al. (2006) find that politically connected firms are more likely to be bailed out by governments and Leuz and Oberholzer-Gee (2006) find that politically connected firms have preferential access to loans from state-owned banks, which may suggest that controlling shareholders at politically connected firms are less concerned about outside investors' negative reaction to expropriation.

However, Ma et al. (2013) argue that in the Chinese context, the primary motivation for private entrepreneurs to establish political connection is to overcome the imperfect market mechanism and disadvantage in resource allocation. Furthermore, to maintain the highly sought-after political connection, controlling shareholders have strong incentives to see their firms continue to perform well. Consistent with this view, they find that privately controlled firms with political connection have less tunneling than those private firms without political connection. Therefore, following the analysis in Section 3.2.2.2, I expect the interactive

impact of family control and corporate opacity on the cost of debt to be stronger for firms without political connection.

I follow Fan et al. (2007) in defining a firm as politically connected if either the chairman or the CEO of the firm is a current or former government official, military officer, member of the Chinese People's Congress (CPC), or member of the Chinese People's Political Consultative Conference (CPPCC). I divide the full sample into politically connected and non-connected subsamples and separately test Equation 2 for each subsample. The results are reported in Table 3.10.

As expected, the coefficients of the interaction terms *Family ownership*Opacity index* are all positive and significantly different from zero for firms without political connection (columns 1 and 2); while neither of the coefficients of the interaction terms is significant for firms with political connection (columns 3 and 4). Cross-equation restriction tests show that the coefficients of *Family ownership*Opacity index* in these two sub-samples differ significantly (p -value = 0.009 for columns 1 and 3; p -value = 0.048 for columns 2 and 4). The coefficient of the stand-alone *Family ownership* is negative and statistically different from zero in all four columns, indicating that when corporate opacity is zero, family firms pay a lower cost of debt than nonfamily firms, regardless of whether or not these firms are politically connected.

In summary, the testing results in Section 3.4.3 show that the moderating effect of corporate opacity on the relationship between family firms and the cost of debt is affected by the probability (incentives and capabilities) of controlling shareholders expropriating outside investors. Specifically, the moderating effect of corporate opacity is stronger when the

controlling shareholders' control-ownership wedge is wider, when external institutions are weaker, and when firms are not politically connected.

The results provide strong support for hypothesis **H2** that corporate opacity plays a more important role in the relationship between family control and the cost of debt when the moral hazard of dominant shareholders is greater. The results also indicate that these three factors appear to be less important than corporate opacity in explaining the relationship between family control and the cost of debt.

3.5 Robustness checks and additional tests

3.5.1 Robustness checks using alternative opacity measures

So far in this chapter, I have followed Anderson et al. (2009) and used a comprehensive index consisting of four components (trading volume, analyst coverage, zero-return trading days, and stock return volatility) to measure corporate opacity. There is a concern, however, that my corporate opacity index described above is inclined to be a liquidity measure and/or it can represent only the inherent information opacity of a firm that is less likely subject to the managers' control. In that case, my inference that family firms can benefit from a lower cost of debt by reducing corporate opacity may be questioned.

To address this concern, I introduce earnings quality (or the likelihood of earnings management) as alternative information opacity measures. Earnings management is initiated by managers to alter information opacity. Information opacity reduces trading volume and increases stock return volatility, which would be reflected in the previously used corporate opacity index.

Table 3.10 Political connection, family firms, corporate opacity, and the cost of debt

This table presents regression results of cost of debt on family firms and on the interaction between family firms and corporate opacity, for politically-connected subsample and non-politically-connected subsample. Columns 1 and 3 use OLS estimation and columns 2 and 4 use firm-fixed estimation. The dependent variable is cost of debt in all models. Political connection is a dummy variable that equals 1 if the CEO of the firm is politically connected. All other variables are defined in Table 3.1. Standard errors corrected for firm-level clustering are reported in brackets. *, **, and *** indicate significance at the 10%, 5% and 1% levels, respectively.

	Dependent variable: Cost of Debt			
	Non-politically-connected subsample		Politically-connected subsample	
	OLS	Firm-fixed effects	OLS	Firm-fixed effects
	(1)	(2)	(3)	(4)
Family ownership	-4.708*** [1.427]	-1.163** [0.548]	-1.647*** [0.603]	-1.643** [0.819]
Family ownership * Opacity index	7.242*** [2.656]	1.847** [0.918]	1.925 [2.544]	2.498 [2.448]
Opacity index	1.142** [0.470]	0.796** [0.383]	0.554 [0.556]	0.935* [0.530]
Constant and control variables	Yes	Yes	Yes	Yes
Industry dummies	Yes	No	Yes	No
No. of obs.	2099	2099	1221	1221
Adjusted R-squared	0.341	0.583	0.371	0.726
F-stat.	12.01***	2.74***	9.85***	3.63***

Two proxies for earnings quality are used. The first measure is the unsigned (absolute value) discretionary accruals calculated using modified Jones model (Dechow et al. 1995). Large discretionary accruals indicate low earnings quality and more opaque information disclosure. I estimate discretionary accruals using firm-year specific method (Francis et al., 2004), by rolling a five-year window. The estimates are winsorized at the 1% and 99% level. Due to data availability, I can only obtain discretionary accruals for 2220 of the initial 3320 firm-year observations. Family firms and nonfamily firms account for 485 and 1735 of the reduced sample, respectively.

Univariate test shows that there is no significant difference in discretionary accruals between family and nonfamily firms (0.068 vs. 0.072, p -value = 0.225), suggesting that family firms as a whole have similar earnings quality as nonfamily firms. However, I have argued that family firms are heterogeneous in their agency problems which can be reflected in different earnings quality among family firms. Thus, I replace opacity index with discretionary accruals and rerun the regressions described in Section 3.4. The results are presented in Appendix. As in the main results, I only report results for family ownership. Results are similar when I use the family control dummy.

In Table A3.1, the negative impact of family ownership on cost of debt exists only in those firms with low discretionary accruals. Results in Table A3.2 show that when discretionary accrual is zero, family controlled firms pay a significantly lower cost of debt than nonfamily firms; however, the significant and positive coefficient of *Family ownership*Discretionary accruals* indicates that discretionary accruals mitigate the negative impact of family ownership on the cost of debt. The results in Tables A3.3 to A3.5 suggest that the moderating effect of discretionary accruals is significantly more profound when perceived expropriation

potential by control shareholders is greater. Overall, the results are largely consistent with those reported in Section 3.4, thus providing additional support to my hypotheses.

One notable observation from the results presented in the Appendix is that, except for in two model (columns 1 and 5 of Table A3.4), the coefficient of the stand-alone *Discretionary accruals* is insignificant, suggesting that earnings quality as measured by discretionary accruals has no impact on the cost of debt for nonfamily firms. This finding seems to be inconsistent with earlier evidence (e.g., Sengupta, 1998; Francis et al., 2005b). One possible explanation is that the overall earnings quality is relatively low for China's listed firms; therefore creditors discount the information contained in earnings quality when making lending decisions. However, the significant coefficient of the interaction term *Family ownership*Discretionary accruals* indicates that earnings quality matters more for family firms than for nonfamily firms for the reasons given in Section 3.2 of this chapter.

The second measure is a dummy variable (*Small auditor*) denoting high corporate opacity if a firm's annual report is not audited by one of the international Big Four or the largest six domestic auditors by revenue.¹⁹ Numerous studies find a negative association between the quality of external auditors and the opacity of the audited firms' financial information (see Armstrong et al. (2010) for a comprehensive review of the related literature). Untabulated results, which are available on request, suggest that my findings remain robust to this alternative measure of corporate opacity.

¹⁹ The international Big Four include Deloitte, E&Y, KPMG, and PwC. The six largest domestic auditors are Shanghai Lixin, Xinyong Zhonghe, Yuehua, Daxin, Dahua, and Zhongshen.

3.5.2 Uniqueness of family blockholders and different effects of founder-, non-founder-family-, and outside- CEOs

I have so far provided evidence that family firms enjoy significantly lower costs of debt than nonfamily firms when corporate opacity is relatively low, because the family blockholders' alignment effects dominate their entrenchment effects. However, it is possible that this finding may also apply to all firms with concentrated blockholders who have a relatively dominant position, rather than being limited to family firms.

To test whether family owners are different from other types of blockholders, I introduce two new sets of variables. *Family block dummy* is a dummy variable that equals 1 if the ultimate largest shareholder has at least 10% of the cash flow rights in the firm (note that 10% cash flow rights is used in my definition of family firms) and is a founding family; and equals zero otherwise. *Nonfamily block dummy* is a dummy variable that equals 1 if the ultimate largest shareholder has at least 10% of the cash flow rights in the firm and is not a founding family; and equals zero otherwise. In untabulated regressions, I use 20% or 30% of total control rights²⁰ as alternative thresholds in defining blockholders and the main results remain unchanged.

Based on the 10% threshold, there are 1092 firm-year observations with a family blockholder and 1610 firm-year observations with a nonfamily blockholder in the full sample. In other

²⁰ A threshold of 20% of control rights is used in Claessens et al. (2000) and Faccio and Lang (2002); a threshold of 30% of control rights is one of the criteria used by the China Securities Regulatory Committee (CSRC) in defining effective control; see "Notice about Issuing 'Guides to Constitutions of Listed Companies'", CSRC, December 16, 1997 (in Chinese, the title is translated by the authors).

words, 2702 out of the total 3320 (or 81.4%) sample firm-year observations have a blockholder with at least 10% cash flow rights. *Family block ownership* (*Nonfamily block ownership*) is the fractional equity ownership of the ultimate controlling shareholder if a firm has a family blockholder (nonfamily blockholder); and zero for all other firms without a family blockholder (nonfamily blockholder). The regression models in Table 3.11 are based on those in Table 3.4 and Table 3.6, but *Family ownership* and *Family dummy* are replaced by the new variables described above.

Columns 1, 2, 5, and 6 examine the overall effects (i.e., without taking corporate opacity into account) of family blockholders and nonfamily blockholders on the firm's cost of debt. The coefficients of *Family block ownership* and *Family block dummy* are all negative and significant at either the 1% or 5% level. These results confirm those reported in Table 4 and support my view that firms with family blockholders pay a lower cost of debt than those without family blockholders. However, none of the coefficients of *Nonfamily block ownership* and *Nonfamily block dummy* is statistically significant, indicating that nonfamily blockholders do not have the same effect as family blockholders in reducing the firm's cost of debt. This finding suggests that the relative dominance of the entrenchment or alignment effect on the cost of debt (discussed in detail in Section 2) is unique to family blockholders.

I next examine whether the moderating role of corporate opacity differs between family blockholders and nonfamily blockholders. As can be seen in columns 3, 4, 7, and 8, the coefficients of the interaction terms *Family block ownership*Opacity index* and *Family block dummy*Opacity index* are all positive and significant, similar to the coefficients of those interaction terms in Table 3.6. However, none of the coefficients of the interaction terms *Nonfamily block ownership*Opacity index* and *Nonfamily block dummy*Opacity index* is

significantly different from zero. These results indicate that, while there is a significant difference in the cost of debt between opaque and transparent family firms, no significant difference exists between opaque and transparent nonfamily firms. In other words, corporate opacity matters more for family firms than for nonfamily firms, in terms of its association with the cost of debt. This provides further support to the choice of corporate opacity in examining the relationship between family control and the cost of debt.

Prior studies find CEO type (e.g., founder-, descendent-, or outside- CEOs) affects firm performance and some other firm behavior (Morck et al., 1988; Anderson et al., 2003; Villalonga and Amit, 2006; Fahlenbrach, 2009; Li and Srinivasan, 2011). To investigate the impact of CEO type on the cost debt, I extend the testing in Equation 2 by adding dummy variables for each CEO type. *Founder CEO* is a dummy variable that equals 1 if the CEO in a family firm is the founder herself. *Family CEO* is a dummy variable that equals 1 if the CEO in a family firm is a member (other than the founder) of the founding family. *Outside CEO* is a dummy variable that equals 1 if the CEO in a family firm is from outside of the family. I report the results in Table 3.12

The results in columns 1 and 2 show that only those family firms with founder-CEOs enjoy lower costs of debt than nonfamily firms. In column 3, the coefficient of *Family ownership* is negative and significant at the 1% level. However, the coefficients of *Family CEO* and *Outside CEO* are both positive and significant at the 1% level as well. The positive and significant coefficients of *Family CEO* and *Outside CEO* in column 3 indicate that both family member CEOs and outside CEOs weaken the overall negative impact of family control on the cost of debt. The firm-fixed effect regression result in column 4 generally confirms the result in column 3.

The results are generally consistent with those in Villalonga and Amit (2006), Fahlenbrach (2009), and Li and Srinivasan (2011), among others, who find that founder-CEOs lead to better performance and corporate governance, which in turn helps to reduce the cost of debt. However, the negative and significant coefficients of *Family ownership* in columns 3, 4, 7, and 8 indicate that even after controlling for CEO type, family firms overall still pay lower costs of debt than nonfamily firms.

The results in columns 5 to 8 reveal that the impact of corporate opacity on the relationship between family control and the cost of debt varies with the type of CEO, specifically, whether the CEOs are founders or not. The coefficient of the interaction term *Founder CEO*Opacity index* is not significantly different from zero; however, the coefficients of *Family CEO*Opacity index* and *Outside CEO*Opacity index* are both positive and significant. These results indicate that, relative to those family firms with family member CEOs and outside CEOs, firms with founder CEOs are perceived to have fewer agency problems between family blockholders and outside investors (Villalonga and Amit, 2006); consequently the cost of debt of founder-CEO firms is less sensitive to corporate opacity.

I further delineate between family firms with family CEOs and family firms with outside CEOs. Although the coefficients of *Outside CEO*Opacity index* appear to be larger than the coefficients of *Family CEO*Opacity index* in all four columns 5 to 8 (especially in the firm-fixed effects models), the unreported results of the *F*-tests indicate no significant difference, as none of the *F*-values is significant at even the 10% level. For example, the result for the test of difference between coefficients of *Outside CEO*Opacity index* and *Family CEO*Opacity index* shows *F*-value = 0.69, with a *p*-value = 0.401.

Table 3.11 Family blockholder, nonfamily blockholder, corporate opacity, and the cost of debt

This table reports regression results of cost of debt on family blockholders, nonfamily blockholders, and their interactions with corporate opacity. Columns (1), (3), (5), and (7) use ordinary least squares estimation and columns (2), (4), (6), and (8) use firm-fixed effects estimation. The dependent variable is cost of debt in all models. Family block ownership is the fractional equity ownership by a family if the family is the controlling shareholder with at least 10% of cash flow rights. Nonfamily block ownership is the fractional equity ownership by a nonfamily controlling shareholder with at least 10% cash flow rights. Family block dummy (nonfamily block dummy) is a dummy variable that equals 1 if the ultimate controlling shareholder is a family (nonfamily) with at least 10% cash flow rights. All other variables are defined in Table 3.1. *P*-values based on standard errors corrected for firm-level clustering are reported in parentheses. *, **, and *** indicate significance at the 10%, 5% and 1% levels, respectively.

	Dependent variable: Cost of debt							
	OLS	Firm-fixed effects	OLS	Firm-fixed effects	OLS	Firm-fixed effects	OLS	Firm-fixed effects
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Family block ownership	-1.726*** (0.000)	-1.027** (0.044)	-3.874*** (0.001)	-1.455* (0.064)				
Family block ownership * Opacity index			0.115** (0.018)	0.033* (0.083)				
Nonfamily block ownership	-0.552 (0.102)	-0.402 (0.687)	-0.529 (0.541)	0.841 (0.384)				
Nonfamily block ownership* Opacity index			0.004 (0.908)	-0.004 (0.803)				
Family block dummy					-0.357*** (0.007)	-0.278** (0.026)	-1.522*** (0.000)	-0.727** (0.048)
Family block dummy * Opacity index							0.057*** (0.001)	0.028* (0.064)
Nonfamily block dummy					0.028 (0.803)	0.094 (0.325)	-0.335 (0.347)	-0.342 (0.320)
Nonfamily block dummy * Opacity index							0.017 (0.258)	0.004 (0.753)
Opacity index			0.026** (0.027)	0.025*** (0.006)			0.015 (0.296)	0.012 (0.320)
Constant and control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and industry dummies	Yes	No	Yes	No	Yes	No	Yes	No
No. of obs.	3320	3320	3320	3320	3320	3320	3320	3320
Adjusted <i>R</i> -squared	0.334	0.613	0.338	0.614	0.331	0.613	0.336	0.615
<i>F</i> -stat.	23.47***	6.42***	21.99***	6.63***	22.19***	6.08***	21.03***	6.44***

Table 3.12 Family firm CEO type, corporate opacity, and the cost of debt

This table reports regression results of cost of debt on family firm CEO type and their interactions with corporate opacity. Columns (1), (3), (5), and (7) use ordinary least squares estimation and columns (2), (4), (6), and (8) use firm fixed-effects estimation. The dependent variable is cost of debt in all models. Founder CEO is a dummy variable that equals 1 if the CEO in a family firm is the founder herself. Family CEO is a dummy variable that equals 1 if the CEO in a family firm is a member (other than the founder) of the founding family. Outside CEO is a dummy variable that equals 1 if the CEO in a family firm is from outside of the family. All other variables are defined in Table 3.1. *P*-values based on standard errors corrected for firm-level clustering are reported in parentheses. *, ** and *** indicate significance at the 10%, 5% and 1% levels, respectively.

	Dependent variable: Cost of Debt							
	OLS	Firm-fixed effects	OLS	Firm-fixed effects	OLS	Firm-fixed effects	OLS	Firm-fixed effects
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Family ownership			-2.152*** (0.000)	-1.168** (0.048)			-1.765*** (0.002)	-0.855** (0.040)
Founder CEO	-0.522*** (0.000)	-0.231* (0.057)	0.167 (0.411)	0.025 (0.920)	-1.494*** (0.000)	-0.651** (0.041)	-0.831* (0.052)	-0.435 (0.247)
Family CEO	0.287 (0.224)	0.182 (0.275)	0.945*** (0.001)	0.418* (0.059)	0.183 (0.778)	-0.190 (0.831)	0.741 (0.270)	-0.036 (0.968)
Outside CEO	0.224 (0.197)	0.005 (0.984)	0.828*** (0.001)	0.264* (0.096)	-0.876** (0.050)	-0.682 (0.168)	-0.374 (0.437)	-0.480 (0.367)
Founder CEO * Opacity index					0.189 (0.848)	0.555 (0.531)	0.157 (0.873)	0.588 (0.501)
Family CEO * Opacity index					1.933*** (0.004)	0.947* (0.062)	1.739*** (0.009)	0.887* (0.085)
Outside CEO * Opacity index					2.150** (0.013)	1.488* (0.082)	2.133** (0.015)	1.460* (0.092)
Opacity index					1.036*** (0.006)	0.651*** (0.009)	0.968** (0.011)	0.654*** (0.009)
Constant and control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and industry dummies	Yes	No	Yes	No	Yes	No	Yes	No
No. of obs.	3320	3320	3320	3320	3320	3320	3320	3320
Adjusted <i>R</i> -squared	0.333	0.612	0.336	0.612	0.338	0.614	0.340	0.614
<i>F</i> -stat.	21.82***	5.52***	21.65***	5.44***	20.40***	5.76***	20.13***	5.63***

3.5.3 Other additional tests

I winsorize all continuous variables used in the multivariate tests at the 1% and 99% level; therefore, the results in Section 3.4 are unlikely to be driven by outliers. In Section 3.4.2.2, I also address the concern about potential endogeneity of family ownership and the cost of debt using the instrumental variable (IV) 2SLS approach. I find that the results are also robust to various alternative model specifications.

In the main analyses, I measure a firm's cost of debt as its interest expense for the year divided by the average short-term and long-term debt during the year. As mentioned in Section 3.3.3.1, Chinese public firms often integrate interest expense into an accounting item called "financial expense", which includes interest expense, interest income, profit and loss on foreign exchanges, and various fees and charges by financial institutions. As a robustness check, I use firm-level financial expenses (scaled by total assets), rather than interest expenses, as a proxy for the cost of debt.

"Financial expense" is explicitly disclosed by every firm in their annual reports and is directly available from the CSMAR database, which minimizes the possibility of mistakes in my manually collecting data from notes to the annual reports. As interest expenses generally represent the largest component of a firm's overall financial expenses, I expect similar results to those reported in Section 3.4. I repeat all tests in Table 3.4 to Table 3.12 using financial expenses (scaled by total assets) as the dependent variable. The results generally confirm my expectation and remain statistically significant.

Finally, the by-industry distribution of sample firm-year observations (Table 3.2B) shows there is no family firm in the power, gas, and water production and supply industry (industry code D). To control for potential industry effects, I follow Anderson et al. (2003) and exclude this industry (34 firm-year observations) from the sample. I find similar results to those reported in Table 3.4 to Table 3.12 using this new sample, which contains 3286 firm-year observations (with all industries containing both family and nonfamily firms).

3.6 Summary and conclusion

The existing literature provides inconclusive empirical evidence on the relationship between family control and firms' cost of debt. Moreover, several studies that examine such a relationship from a perspective of country-level institutions (e.g., Ellul et al., 2007; Boubakri and Ghouma, 2010) seem to generate inconsistent results. Therefore, I posit that the impact of family control on the cost of debt is affected by certain firm-level factors. Using a sample of 3320 firm-year observations of privately (i.e., nonstate) controlled but publicly listed firms in China over the period 2004–2010, I find that on average family controlled firms pay significantly lower costs of debt, relative to nonfamily controlled firms. I also find that controlling families' negative impact on the firms' cost of debt exists mainly in relatively less opaque firms. There is no significant difference in the cost of debt between family and nonfamily firms when corporate opacity is relatively high.

I further provide evidence that the moderating effect of corporate opacity on the relationship between family control and the cost of debt is affected by certain other factors. Specifically, the cost of debt of family firms is more sensitive to corporate opacity when the controlling

shareholders' control-ownership wedge is wider, when external institutions are weaker, and when firms are not politically connected.

This study has important implications for family firms. Like firms in many other emerging markets, listed firms in China overall rely heavily on debt to finance their growth. Therefore, identifying factors that influence the relationship between family control and the cost of debt is especially important in helping family firms, not only in China but also in other emerging markets, to find out how they can benefit from lower costs of debt. In addition, families in both developed and emerging markets commonly control the firms with a relatively small equity ownership. The results show that family-controlled firms with high control-ownership wedges can still enjoy a lower cost of debt than nonfamily firms, if they provide relatively more transparent information to outside investors.

The findings that the impact of family control on the cost of debt is more sensitive to corporate opacity when external legal and market institutions are relatively weaker indicate that transparent information is even more valuable to family firms in countries with weak institutions, where, according to Ellul et al. (2007), family firms are more likely to suffer from higher costs of debt.

Appendix Robustness checks using unsinged (absolute value) discretionary accruals as a measure of corporate opacity

Tables in this appendix present regression results of the impact of family firms on the cost of debt and on the role of corporate opacity on the relationship between family firms and the cost of debt. The dependent variable is cost of debt in all regressions. Discretionary accruals are calculated using modified Jones model (Dechow et al. 1995). Higher (absolute) values of discretionary accruals indicate greater corporate opacity. All other variables are defined in Table 3.1. The constant term and control variables are included in all regressions but their coefficients are not reported. Standard errors corrected for firm-level clustering are reported in brackets. *, **, and *** indicate significance at the 10%, 5% and 1% levels, respectively.

Table A3.1 Family firms and the cost of debt (full sample and sub-sample analyses)

	Dependent variable: Cost of debt					
	Full sample		Low-accruals subsample		High-accruals subsample	
	OLS (1)	Firm-fixed effects (2)	OLS (3)	Firm-fixed effects (4)	OLS (5)	Firm-fixed effects (6)
Family ownership	-0.884** [0.426]	-1.326* [0.706]	-1.219*** [0.408]	-0.922** [0.444]	-0.436 [0.615]	-0.370 [1.520]
Constant and control variables	Yes	Yes	Yes	Yes	Yes	Yes
Year and industry dummies	Yes	No	Yes	No	Yes	No
No. of obs.	2220	2220	1110	1110	1110	1110
Adjusted <i>R</i> -squared	0.204	0.414	0.209	0.508	0.221	0.308
<i>F</i> -stat.	12.02***	2.89***	6.68***	2.31***	11.22***	2.27***

Table A3.2 Family firms and the cost of debt (full sample with interaction term)

	Dependent variable: Cost of debt	
	OLS (1)	Firm-fixed effects (2)
Family ownership	-1.246** [0.601]	-1.549** [0.741]
Family ownership*Discretionary accruals	6.165** [2.563]	4.492** [2.083]
Discretionary accruals	0.509 [0.395]	0.007 [0.985]
Constant and control variables	Yes	Yes
Year and industry dummies	Yes	No
No. of obs.	2220	2220
Adjusted <i>R</i> -squared	0.207	0.415
<i>F</i> -stat.	11.97***	2.57***

Table A3.3 Control-ownership wedge, family firm, corporate opacity, and the cost of debt

Dependent variable: Cost of debt				
High-wedge subsample		Low-wedge subsample		
	OLS	Firm-fixed effects	OLS	Firm-fixed effects
	(1)	(2)	(3)	(4)
Family ownership	-1.289** [0.636]	-3.256** [1.609]	-1.141** [0.575]	-1.336*** [0.436]
Family ownership * Discretionary accruals	2.664** [1.329]	9.892** [4.984]	7.199 [5.113]	2.429 [12.091]
Discretionary accruals	0.588 [0.481]	-0.430 [0.914]	0.740 [0.585]	1.423 [3.035]
Constant and control variables	Yes	Yes	Yes	Yes
Year and industry dummies	Yes	No	Yes	No
No. of obs.	1196	1196	1024	1024
Adjusted <i>R</i> -squared	0.235	0.540	0.210	0.321
<i>F</i> -stat.	18.44***	2.47***	30.56***	3.46***

Table A3.4 External institutions, family firms, corporate opacity, and the cost of debt

Dependent variable: Cost of debt								
External factor: Market development					External factor: property protection			
Low-market-development subsample		High-market-development subsample		Low-property-protection subsample		High-property-protection subsample		
OLS	Firm-fixed effects	OLS	Firm-fixed effects	OLS	Firm-fixed effects	OLS	Firm-fixed effects	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
Family ownership	-1.469** [0.577]	-2.219* [1.161]	-0.332** [0.147]	-1.445* [0.874]	-1.558** [0.722]	-2.536*** [0.823]	-0.264** [0.126]	-1.763* [0.904]
Family ownership * Discretionary accruals	10.737** [4.887]	7.119** [3.501]	4.668 [6.112]	1.254 [1.726]	13.714*** [5.082]	10.127** [5.002]	7.297 [6.073]	3.630 [6.182]
Discretionary accruals	1.759* [0.906]	0.434 [0.834]	0.312 [0.873]	1.003 [1.262]	1.151* [0.674]	0.160 [0.853]	0.826 [0.583]	0.352 [1.319]
Constant and control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year and industry dummies	Yes	No	Yes	No	Yes	No	Yes	No
No. of obs.	925	925	948	948	933	933	940	940
Adjusted <i>R</i> -squared	0.215	0.540	0.345	0.634	0.235	0.542	0.311	0.638
<i>F</i> -stat.	14.44***	39.94***	6.21***	2.90***	14.25***	53.38***	4.88***	2.76***

Table A3.5 Political connection, family firms, corporate opacity, and the cost of debt

Dependent variable: Cost of debt				
	Non-politically-connected subsample		Politically-connected subsample	
	OLS (1)	Firm-fixed effects (2)	OLS (3)	Firm-fixed effects (4)
Family ownership	-1.622*** [0.631]	-1.870** [0.766]	-0.970** [0.491]	-0.520 [0.346]
Family ownership * Discretionary accruals	9.277** [4.045]	6.190* [3.403]	1.863 [2.003]	2.740 [2.268]
Discretionary accruals	0.384 [0.443]	0.753 [1.539]	0.913 [0.828]	0.421 [0.720]
Constant and control variables	Yes	Yes	Yes	Yes
Year and industry dummies	Yes	No	Yes	No
No. of obs.	1430	1430	790	790
Adjusted <i>R</i> -squared	0.219	0.356	0.239	0.652
<i>F</i> -stat.	9.80***	2.43***	5.32***	2.60***

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Chapter Four Financial reporting quality in family firms:

Evidence from restatements

4.1 Introduction

High-quality accounting information plays a central role in designing the mechanisms that mitigate various agency conflicts among blockholders, managers, and outside investors (Bushman & Smith, 2001; Healy & Palepu, 2001; Armstrong, Guay, & Weber, 2010). Because of the prevalence of family firms across the globe, a growing number of studies examine the association between family ownership/control and the quality of accounting information (e.g., Wang, 2006; Chen, Chen, & Cheng, 2008; Cascino, Pugliese, Mussolino, & Sansone, 2010; Chen, Chen, & Cheng, 2014). The evidence from existing studies is, however, inconclusive. Moreover, little is known about whether and how family control influences the way investors react to changes in accounting information quality.

In this chapter, I examine whether mandatory material restatements²¹ are associated with family control which has so far received disproportionate academic attention despite the prevalence of family firms across the world. I focus on restatements because they are a highly visible and relatively objective form of low financial reporting quality (Dechow, Ge, & Schrand, 2010; Cao, Myers, & Omer, 2012). Although existing literature provides limited

²¹ Because prior literature finds significant differences in market reactions between restatements of material and immaterial nature and between restatements initiated by different parties (e.g., Palmrose, Richard, & Scholz, 2004; Hennes et al., 2008; Firth, Rui, & Wu, 2011; Cao et al., 2012), I in this chapter focus on mandatory material restatements to avoid unnecessary complexity. However, future research to further examine the possible different impacts of family control on these different types of restatements will be interesting.

direct evidence on the association between restatements and family control, it nonetheless provides necessary backgrounds for my research. In this study I build on prior literature to answer two related questions. Does family control reduce or increase the likelihood of a firm restating its financial statement? Do investors react differently to restatements announced by family-controlled firms and those by nonfamily-controlled firms?²²

The link between family control and the likelihood of accounting restatements is well supported by economic theory and existing literature. On the one hand, the multi-generation nature of controlling families' ownership suggests that they have greater reputation concerns than nonfamily blockholders (Gilson, 2007; Chen, Chen, & Cheng, 2008). The costly reputational penalties (Karpoff, Lee, & Martin, 2008; Murphy, Shrieves, & Tibbs, 2009) as well as losses of other reputation-based nonpecuniary benefits such as a high social status and political connections are likely to deter family-controlled firms from misstating their financial statements. At least, family firms will avoid material misstatements that are likely to trigger enforcement actions such as mandatory restatements and/or condemnation from regulators.

In addition, family owners' concentrated and underdiversified equity ownership means that they will bear a significant proportion of economic losses resulted from mandatory restatements. This further reduces family owners' incentive of misreporting. On the other hand, family owners' concentrated ownership could induce them to expropriate other investors and they are likely to distort financial statements to cover up private benefits of control. Furthermore, family managers are generally less likely to be replaced than nonfamily

²² Throughout this chapter, I use the term 'family firms (nonfamily firms)' or 'family-controlled firms (nonfamily-controlled firms)' interchangeably, because my definition of family firms requires that the founding family exercises effective control of the firm (see Section 4.3.3.1 for more details).

managers even when misreporting is later discovered (Schulze, Lubatkin, & Dino, 2003; Leone & Liu, 2010).

In summary, controlling families' greater reputation concerns and high equity ownership indicate that they have more incentives provide high-quality financial reporting. However, family owners' expropriation incentives and less career concern could induce them to misreport financial statements. Although family control certainly has influence on financial reporting quality, it is unclear, *ex ante*, what the actual impact will be.

I next explore whether investor reactions to forced restatements differ between family-controlled firms and nonfamily-controlled firms. Restatements provide new information that leads to erosion of investor perception about managers' and/or controlling shareholders' trustworthiness and financial reporting credibility (Mercer, 2004). Restatement firms have incentives to take various actions in a bid to restore investor trust and to enhance perceived credibility of future financial reports (Faber, 2005). The unique nature of family ownership suggests that family control could affect market reactions in two opposite directions.

On the one hand, family firms' greater reputation concerns could give them more incentives, as opposed to nonfamily firms, to take actions to address problems and to restore impaired reputation. As investors value improvement in corporate governance following restatements (Faber, 2005), this suggests that investors are likely to react less negatively to restatements made by family firms than to those by nonfamily firms.

On the other hand, family-controlled firms are characterized by potentially more serious agency conflicts between the controlling shareholder and minority shareholders (i.e., Type II

agency problem), suggesting that investors have a greater demand for high-quality accounting information for family-controlled firms and consequently are more sensitive to the deterioration in the quality of accounting information in family-controlled firms than in nonfamily-controlled firms.

In addition, accounting restatements reveal that the design or/and the implementation of corporate governance is relatively weak, deepening investors' concerns about possible expropriation by controlling shareholders, which are perceived to be more severe in family-controlled firms than in nonfamily-controlled firms. Finally, the literature finds that the media is more likely to publicize targets or events with higher information demand or with high prominence (e.g., Fombrun & Shanley, 1990; Dyck & Zingales, 2003). This suggests that restatements announced by family-controlled firms are likely to attract more media attention, which further reinforces the more negative market reactions to family firm restatement announcements.

I test these two competing theories about the impact of family control on the likelihood of financial misreporting and on market reactions to restatements with a sample of 151 mandatory material restatements announced by non-state-controlled public firms in the period of 2004 to 2010. Using a matched-firm approach, I find clear evidence that compared to nonfamily-controlled firms family-controlled firms in China have a significantly lower likelihood of misreporting their annual financial statements, even after controlling for firm characteristics and other corporate governance proxies that are found to be associated with restatements in prior studies. This finding is consistent with the notion that controlling families have a greater concern for reputation as well as the overall evidence that family

owners have greater incentives to mitigate agency costs than nonfamily blockholders (e.g., Wang, 2006; Chen et al., 2008, 2014).

With respect to investor reactions to restatement announcements, I find that family control is associated with significantly stronger market reactions, specifically more negative cumulative abnormal return (CAR), higher abnormal return variance (ARV), higher abnormal trading volume (ATV), and higher abnormal bid-ask spread (ABAS), over short windows surrounding the restatement announcements. The more negative reactions to family firm restatements are even more pronounced when corporate information is more opaque. I also find that family restatement firms experience a significantly larger loss in the information content of earnings measured by earnings response coefficient (ERC) compared to nonfamily restatement firms.

Recall earlier finding that family firms are less likely than nonfamily firms to restate their financial reports due to their greater reputation concerns; the results on market reactions thus suggest that restatements do more damage to investor trust for firms with good past record. To this extent, my findings are consistent with that in Kouwenberg and Phunnarungsi (2013) who find that market reactions to announcements of regulation violations are stronger for firms with low past violations.

This chapter contributes to the literature in several ways. First, I establish a direct link between family control and market reactions to accounting restatements. In this regard, this study complements an important body of literature that tries to identify the determinants of market reactions to restatements (e.g., Palmrose et al., 2004; Callen, Robb, & Segal, 2008; Peterson, 2012).

Second, prior studies commonly argue that family firms have a greater concern for reputation than nonfamily firms. I build on prior literature to address an important but largely ignored question, 'What are the implications or consequences when the reputation of controlling families is impaired?' To this extend, the results also provide empirical support to the expectancy violation theory (Burgoon & LePoire, 1993; Rhee & Haunschild, 2006).

Third, this study enhances our understanding of the impact of family control/ownership on reporting quality and provides a possible direction for future research. For example, an alternative explanation for the more negative market reactions to family firm restatements could be that, although family firms are less likely to misreport, once they are engaged in financial misreporting they are associated with more serious restatements²³. Although I am unable to directly test this hypothesis due to data limit, future studies can examine whether the impact of family control on financial misreporting is conditioned on the severity of the misconduct.

The rest of this chapter proceeds as follows. Section 4.2 reviews related literature and presents the hypotheses. Section 4.3 describes the research design and sample. Section 4.4 reports main empirical results. Finally, Section 4.5 concludes.

4.2 Literature review and hypothesis development

4.2.1 Family control and the likelihood of accounting restatements

²³ Although all restatements in the sample are initiated by regulators, they can still differ in terms of severity. Ideally, I would like to have the data on the ratio of the amount in question to the total earnings/assets/revenue. However, not all firms disclose these figures in their restatement announcements.

Direct evidence on the relationship between family control and the incidence of accounting restatements is scarce. Therefore, I briefly review the literature that elaborates the unique characteristics of family ownership and some empirical evidence on the relationship between family firms and the quality of financial reporting, from which I then introduce my hypotheses.

The literature often points out family owners' greater concern for reputation as a salient characteristic of family firms. Gilson (2007) points out that 'because of intrafamily inheritance and family ties, the current generation of decision makers, at least in functional family businesses, treats the next generation's utility as the equivalent of their own' (p. 643). Therefore, family owners' desire to pass on successful family businesses to future generations can constitute a powerful motivation to adopt a long-term investment approach and naturally give them greater incentives to invest more to build and protect a reputation (Gilson, 2007; Miller, Le Breton-Miller, & Scholnick, 2008). In addition, Burkart, Panunzi, and Shleifer (2003) point out that a family name connected to a successful family business may bring in nonpecuniary or reputational benefits, such as a high social status and political connections. The analysis thus suggests that controlling families have stronger incentives than nonfamily blockholders not to misstate their financial statements, because misstatements could impair or even damage firm reputation, which is more difficult to restore for family firms than for nonfamily firms.

We argue that family owners in China are likely to have even a greater concern for reputation than their counterparts in more developed markets. The relatively weak formal institutions in China and especially the lack of an effective judicial and investor protection system mean outside investors have few channels through which to take actions against controlling

shareholders when their rights are jeopardized (MacNeil, 2002; Allen, Qian, & Qian, 2005). As a result, contracting and financing in China often rely on alternative informal governance mechanisms. Reputation probably plays the most important role in informal enforcement, along with relationship (Allen et al., 2005; Gilson, 2007; Fan, Wong, & Zhang, 2012). This is in stark contrast with contracting in more developed markets where it is largely rule-of-law-based.

Controlling families' long-term oriented approach also means they are less interested in the day-to-day stock price movements, thus giving family-controlled firms less incentives to manage earnings to manipulate short-term stock prices. In addition, the (frequent) unification of the positions of controlling shareholder and management or their dominant power over nonfamily managers suggest that controlling families are effective 'monitors-in-place' (Anderson, Duru, & Reeb, 2009) who are both motivated and well positioned to discipline managerial agents. Furthermore, family members are often as knowledgeable as managers about their firms, enabling them to provide effective checks on professional managers. Consistent with this view, Chen (2005) finds that not only can family owners quickly detect managers' manipulation of accounting information, they can also rely less on accounting-based performance measures in designing management compensation. This in turn reduces managers' opportunistic behavior in earnings management (Jensen & Meckling, 1976; Coffee, 2005).

Taken together, given that family control can either reduce or increase the likelihood of restatement, I present the first hypothesis as nondirectional:

H1: Compared to nonfamily-controlled firms, family-controlled firms are less likely to misstate their accounting statements.

4.2.2 Family control and market reactions to accounting restatements

Family firms are also characterized by concentrated ownership that may imply possibly more severe agency problems between large shareholders and minority shareholders. Minority shareholders, being concerned about controlling families' potential expropriation risk, will demand high-quality accounting information. This suggests that, compared to minority shareholders in nonfamily-controlled firms, those in family-controlled firms are more sensitive to the quality and hence the deterioration in the quality of accounting information. In addition, a strong internal corporate governance system is important in helping to mitigate agency conflicts, especially when external governance (e.g., statutory regulation and formal institutions) is weak, such as in the Chinese market. Restatements provide new information that allows outside investors to learn that either the firm's internal governance policy is not well designed to prevent controlling shareholders' opportunistic behavior, or such a governance system is not effectively implemented (Kinney & McDaniel, 1989). Furthermore, restatements exacerbate the information asymmetry between insiders and minority shareholders, making it even more difficult for minority shareholders to assess the efficacy of a firm's internal governance. As minority shareholders are generally more concerned about controlling shareholders' opportunistic behavior in family-controlled firms than in nonfamily-controlled firms, the analysis above thus suggests more negative investor reactions to restatements announced by family-controlled firms.

In addition, a number of studies find that the media (or the press) can play an important role in identifying and monitoring firm frauds (Miller, 2006). In choosing which firm or fraud to cover, reporters/publishers will maximize the benefits of articles by focusing on firms that have high visibility or those with great information demand (Dyck & Zingales, 2003). The

literature finds that the media is more likely to publicize targets or events with prominence or high reputation (Fombrun & Shanley, 1990; Hoffman & Ocasio, 2001). This suggests that, compared to nonfamily firm restatements, restatements by family-controlled firms, and in particular those involving high-profile entrepreneurs, are more attractive to readers and more likely to be picked up by the media. Does such a bias in media coverage affect investor reactions? Dyck and Zingales (2003) find that stock prices are most reactive to earnings announcements emphasized by the media, which implies that investors will react more strongly to family firm restatements than to nonfamily firm restatements, because the former are likely to attract more intense media coverage.

Finally, firms found to be involved in accounting irregularities and other frauds commonly take actions in a bid to improve corporate governance and to restore investor trust. Replacing the CEO and/or other members of the firm's top management is one of the most typical actions (Hennes, Leone, & Miller, 2008; Karpoff et al., 2008). It is a common practice for the founder or other members from the controlling family to take key management positions in family firms. The literature has provide theoretical (e.g., Schulze, Lubatkin, & Dino, 2003) and empirical evidence (e.g., Leone & Liu, 2010) that a top manager from the controlling family is significantly less likely than an outside manager to be punished or even fired, especially when such an action will have a spillover effect on family relationships outside business. The discussion here thus suggests that, compared to nonfamily firms, family firms are often short of one important and effective tool to signal to investors the firms' intent and commitment to improve corporate governance and to restore investor trust.

Summing up our discussion, minority investors on the one hand have a higher expectation about the reputation concerns of the controlling families; while on the other hand they have

greater concerns about controlling families' opportunistic behavior. Thus, they have both a higher expectation about the supply of and a greater demand for high-quality accounting information from family-controlled firms. Once a family-controlled firm restates its accounting statement, minority investors' initial expectation about reputation is violated and their concerns about controlling families' opportunistic behavior become dominant. In other words, a restatement by a family firm will turn around investors' attitude towards family firms. Such a perception, together with the unfavorable bias in media coverage, is likely to lead minority investors to react more negatively to family firm restatements. Thus, we state our second hypothesis as follows:

H2: Accounting restatements announced by family-controlled firms lead to stronger and more negative market reactions than restatements announced by nonfamily-controlled firms.

4.2.3 Information opacity and the impact of family control on market reactions

Financial misstatement implies information asymmetry between controlling shareholders and outside investors. The controlling shareholders conceal the true information for the purpose of further expropriation of minority shareholders. Therefore, opaque corporate information leads outside investors to perceive that the potential agency conflicts between controlling shareholders and minority shareholders are more serious, compared to when information is more transparent (Fan & Wong, 2002; Luez et al., 2003; Anderson et al., 2009). This will further increase outside investors' mistrust in the controlling families/managers. As restatements are likely to lower the credibility of the restatement firm's accounting information and as well as increase investors' concerns about controlling families' opportunistic and expropriating behavior, the analysis above thus suggests that the

relationship between family control and market reactions to restatements can be affected by the relative opacity of the firm's information. Thus, I state my third hypothesis as follows:

H3: The impact of family control on market reactions to restatements is more pronounced for firms with more opaque corporate information.

4.3 Research design and sample

4.3.1 Research design

To test the first hypothesis, I estimate the following logit model:

$$Re\ state = \beta_0 + \beta_1 Family + \sum_2^k \beta_i Control_i + Fixed\ Effects + \varepsilon \quad (4.1)$$

In this model, *Restate* is a dummy variable that equals 1 if a firm restates its annual financial report in a given period; *Family* is a dummy variable that denotes a family-controlled firm; and *Control_i* is a set of control variables. All control variables in Eq. (1) are measured in the year when the misstatement occurs and not in the year when a subsequent restatement is announced.

To test the second hypothesis, I estimate the following baseline regression model:

$$Market\ Reaction_i = \beta_0 + \beta_1 Family + \sum_2^k \beta_i Control_i + Fixed\ Effects + \varepsilon_i \quad (4.2)$$

In this model, *Market Reaction* is the reaction generated by a firm's announcement of an accounting restatement and is represented by one of the following four measures: cumulative abnormal return (CAR), abnormal return variance (ARV), abnormal trading volume (ATV),

or abnormal bid-ask spread (ABAS) over the short-term window surrounding the announcement. If family control leads to more negative market reactions to a restatement announcement, I expect β_1 to be negative when market reaction is measured by CAR and β_1 to be positive when market reaction is represented by the other three measures, and vice versa. While it is relatively easy and straightforward to understand an expected positive β_1 when market reaction is measured by ARV and ABAS, the reason why a positive β_1 for ATV indicates more negative market reaction is as follows. Karpoff (1987) argues that volume is positively related to the magnitude of price change and to the price change *per se*. Friedman (1969) further points out that a heavy volume of trading reflects differences of opinion among investors about the future course of prices. I argue that if restatements by family firms result in greater uncertainty about the credibility of the firms' post-restatement performance as well as the performance *per se*, it should be reflected in larger short-term stock return variances, which in turn are expected to be associated with larger trading volumes based on the theoretical and empirical evidence in Karpoff (1987) and Friedman (1969).

In addition to the baseline regression model, I will also examine whether the relationship between family control and market reactions is affected by corporate information opacity. To test the third hypothesis, I estimate the following regression model:

$$\begin{aligned}
 \text{Market Reaction}_i = & \beta_0 + \beta_1 \text{Family} \\
 & + \beta_2 \text{Family} * \text{Ownership Wedge (or Opacity Index)} \\
 & + \beta_3 \text{Ownership Wedge (or Opacity Index)} \\
 & + \sum_4^k \beta_i \text{Control} + \text{Fixed Effects} + \varepsilon_i
 \end{aligned} \tag{4.3}$$

In this model, *Ownership Wedge* is the difference between the controlling shareholder's control (voting) rights and cash flow rights; *Opacity Index*, measured by a comprehensive

index that consists of four components based on stock trading information and analyst coverage, gauges the relative information opaqueness of a firm.

I estimate all regressions by controlling for year and industry fixed effects. Industry dummies are based on the two-digit classification issued by the China Securities Regulatory Commission (CSRC). All continuous variables are winsorized at the 1% and 99% levels to minimize the influence of outliers. In line with prior studies, I control for heteroskedasticity using White-adjusted standard errors.

4.3.2 Sample construction

The sample selection procedures are as follows. I first manually check all announcements containing the keyword 'correction' ('*gengzheng*' in Chinese *pinyin*) that are issued by listed nonfinancial firms on the Shenzhen and Shanghai Stock Exchange websites. The sample period spans from 2004 to 2010. I choose 2004 as my beginning year for the following reason. On January 6, 2004, the CSRC issued a notice in which it clearly stated that 'a firm must in a timely manner disclose restated financial information in the format of a significant event announcement if there are accounting errors'. Thus, restatements of substantive significance exist only after 2004.

Although this study focuses on restatements of annual reports only²⁴, I do not include 'annual' or 'annual report' as my filtering keywords because I note that a number of restatement

²⁴ Listed firms in China are not mandatorily required to have their quarterly and half-yearly financial statements formally audited. Thus, these two types of financial statements are not expected to have the same credibility as that of annual statements.

announcements do not contain these two words. In other words, including 'annual' or 'annual report' in the search would significantly reduce the sample size. I include in my sample only those restatements that are initiated by external auditors and regulators such as CSRC and stock exchanges.

I first exclude 'ST' (special treatment) firms. ST firms are those firms that have made losses in two consecutive years and face the risk of being delisted if they continue to make losses for a third year, which gives them strong incentives to misreport their financial statements. The trading behavior of ST firms is also likely to be different from non-ST firms.

I then restrict the sample to non-state-owned enterprises (non-SOEs) for the following reasons. SOEs in China often have various political and social objectives, such as improving employment, strengthening fiscal conditions of local governments, and maintaining social stability, in addition to operating performance. Therefore, compensation and/or promotion of managers of SOEs rely less on accounting measures when compared to managers of non-SOEs. Moreover, SOEs' access to bank loans is also less related to firm performance. Thus, compared to managers of non-SOEs, managers of SOEs have weaker incentives to manipulate accounting earnings. Furthermore, Firth et al. (2011) point out that even when false accounting has occurred, disclosure of it through accounting restatement is less likely for SOEs than for non-SOEs. I require that a firm is a non-SOE both in the year of misstatement and in the year of restatement. I identify 420 restatements announced by non-SOEs during the sample period.

Following Firth et al. (2011), I next limit the sample to restatements that affect revenues, net earnings, or/and assets. I also exclude restatements resulting from minor or technical errors (e.g., nondisclosure of immaterial information, misprints, or simple miscalculations in the

original annual reports), because Hennes et al. (2008) emphasize the importance of distinguishing between errors and irregularities. These criteria reduce the sample size to 183. Next, I exclude restatements that are corrections or supplementary restatements to previously announced restatements. This requirement further reduces the sample size to 177. Finally, I eliminate observations that lack the required stock trading data. As a result, the selection criteria yield a final sample of 151 restatements. The sample construction procedure is summarized in Table 4.1.

Consistent with prior studies (e.g., Agrawal & Chadha, 2005; Leone & Liu, 2010; Firth et al., 2011; Kryzanowski & Zhang, 2013), I adopt a matched-firm approach. I match each of the 151 restatement firms with a matching firm that satisfies all of the following requirements: (1) has the same CSRC two-digit industry code as the restatement firm; (2) has the closest size (total assets) to the restatement firm; (3) does not announce any material restatements within a five-year window (two years before and two years after) surrounding the announcement of a restatement by the restatement firm; (4) has been listed for the same number of years (and on the same stock exchange when possible) as the restatement firm; and (5) is not an ST firm. The average misstatement firm is slightly smaller than the average matching firm ($p = 0.093$). I control for firm size in all multivariate regressions.

I obtain accounting and corporate governance data from the China Securities Market and Accounting Research (CSMAR) database. Compiled by Shenzhen GTA Information Technology Company Ltd., CSMAR is one of the most widely used databases for research on the Chinese stock market. Daily stock return and trading volume data are also from CSMAR; while data used to calculate bid-ask spreads is provided by Securities Industry Research Centre of Australia (SIRCA).

Table 4.1 Sample selection

This table summarizes the sample selection process. The sample period is between 2004 and 2010. Each restatement firm is matched with a control firm that is based on size, IPO year, stock exchange, and CSRC two-digit industry code. Each control firm is required to have not announced a restatement within a five-year window.

Number of restatements of annual reports identified on the Shenzhen and Shanghai Stock Exchange websites (requiring that a firm is a non-SOE in the year the restatement is announced)	492
Less restatements where the firm is an SOE in the year of misstatement	(72)
All restatements issued by nonstate-controlled firms	420
Less restatements that result from minor and/or technical errors	(237)
Restatements that involve corrections to revenue, earnings, or assets	183
Less restatements that are a correction or supplementary to previous restatements	(6)
Less restatements that lack required stock trading data	(26)
Sample of restatements	151
Plus matching firms	151
Total sample of restatement and matching firms	302

4.3.3 Variable definitions

4.3.3.1 Family control

Because of concentrated ownership in many European and East Asian countries, researchers commonly apply a minimum threshold for the largest shareholder's ownership to ensure effective control (Fan & Wong, 2002; Dyck & Zingales, 2004). In this study, I use a dummy variable *Family* to denote family control if: (1) the founder and members of the founding family (either by blood or through marriage) hold at least 20% of the firm's control rights; and (2) the founding family (all family members combined) is the ultimate largest shareholder.

In addition to the criteria described above I also apply some other rules in determining a family-controlled firm, given the unique characteristics of the Chinese markets. First, if a firm is established by more than one family, I regard the family with the largest control rights as the controlling family.

Second, private individuals were not allowed to own or control a business until some years after the start of the economic reform; until then many businesses were registered as village and town enterprises (VTEs), even though they were founded and controlled by natural persons. These firms were later re-registered as private enterprises when it was permitted by the new laws. In those cases these firms are regarded as family firms if they meet the two criteria of my family firm definition (i.e., ultimate largest shareholder with at least 20% control rights). In some other cases, managers of VTEs later become the controlling shareholders through management buyouts. I view these firms as nonfamily firms, even if the controlling shareholders have more than 20% of control rights.

4.3.3.2 Market reactions

In this chapter, I test market reactions to restatement announcements with four measures, namely cumulative abnormal returns (CAR), abnormal return variance (ARV), abnormal trading volume (ATV), and abnormal bid-ask spread (ABAS), over the event window surrounding the announcement.

I follow prior studies such as Firth et al. (2011) and Pevzner, Xie, and Xin (in press) to calculate CAR using the market-adjusted-model returns. I first calculate the daily abnormal return (AR) over the event window from the following model:

$$AR_{i,t} = R_{i,t} - (\alpha_i + \beta_i * R_{mt})$$

where $AR_{i,t}$ is the AR of firm i on day t , $R_{i,t}$ is the actual stock return (dividend adjusted) of firm i on day t , R_{mt} is the market return (dividend adjusted) on day t , and α_i and β_i are the market model estimates of firm i obtained from the estimation window $[-120, -21]$. I then sum $AR_{i,t}$ to calculate the CAR over the event window.

I adopt the approach in DeFond, Hung, and Trezevant (2007) and Pevzner et al. (in press) to calculate the ARV as follows. I obtain the stock return variance over the event window as the average of the squared market-adjusted return $AR_{i,t}^2$. I next obtain the stock return variance over the estimation window $[-120, -21]$ as the variance of the residual returns from each firm's market model estimated over the estimation window. The ARV is then calculated as the ratio of the stock return variance over the event window to the stock return variance over the estimation window.

I again follow DeFond et al. (2007) and Pevzner et al. (in press) to calculate the ATV by dividing the average daily trading volume over the event window by the average daily trading volume over the estimation window $[-120, -21]$, where trading volume is measured as the number of shares traded on day t scaled by the total number of tradable shares outstanding on day t .

I measure the ABAS as the average bid-ask spread over the event window divided by the average bid-ask spread over the estimation window $[-120, -21]$. Following prior studies such as Cai (2004) and Firth et al. (2011), I use the relative bid-ask spread, i.e., absolute spread divided by the average of bid and ask, in my tests. The average relative spread is then calculated as the mean relative spread measured in hourly intervals over the event window and the estimation window, respectively.

4.3.3.3 Corporate information opacity

To test $H3$, I use two variables as proxies for a firm's information opacity. The first variable is the divergence between the controlling shareholder's control rights and cash flow rights. Fan and Wong (2002) and Francis, Schipper and Vincent (2005) find that accounting information is less informative (i.e., more opaque) when the controlling shareholder's control rights exceed cash flow rights. Leuz et al. (2003) also find that controlling shareholders have incentives to provide opaque information when they intend to extract private benefits of control which is more likely when there is a divergence between control and cash flow rights. Following prior studies, the control-ownership wedge is calculated as the difference between control rights and cash flow rights of the ultimate largest shareholder. A larger wedge indicates a higher level of information opacity.

The second variable follows Anderson et al. (2009) and is a comprehensive index that consists of four components based on stock trading information and analyst coverage. To construct the corporate opacity index, I first calculate the four individual components of opacity, namely trading volume, log of the number of analysts following the firm, proportion of zero-return trading days, and daily stock return volatility. I next rank each of these four components into deciles, with a value of 10 representing the most opaque firms and a value of 1 representing the least opaque firms. I then sum these four components and divide it by a factor of 40, which is the maximum possible value. This process yields a corporate opacity index that ranges from 0.1 to 1, with higher values indicating higher levels of information opacity.

4.3.3.4 Control variables

I include a set of control variables in the regression models following prior studies. Firm size (*Firm size*), profitability (*ROA*), financial leverage (*Leverage*), and whether the firm records a loss in the previous year (*Negative EPS*) are found to be associated with the occurrence of accounting restatement in a large number of studies (e.g., Kinney & McDaniel, 1989; DeFond & Jiambalvo, 1991; Cao et al., 2012). Starting from 2005, China conducts a nontradable share (NTS) reform. After the NTS reform, those previous nontradable shares (often held by blockholders) become freely tradable in the stock market. This may have two opposite effects on the likelihood of misstatements. On the one hand, blockholders may become more concerned about potential negative market reactions once misstatements are caught. On the other hand, blockholders may have greater incentives to misstate financial statements in order to manipulate stock prices. It's unclear which motivation will dominate.

Thus, I introduce a dummy variable *Reform*, which equals 1 if a firm has completed the NTS reform and zero otherwise.

I also control for several corporate governance variables in the regressions. A large number of studies find a positive association between a firm's earnings quality and the external auditor being Big N, both in the international setting (DeFond & Jiambalvo, 1991; Teoh & Wong, 1993; Faber, 2005) and for the Chinese market (Chen, Chen, Lobo, & Wang, 2011; Firth et al., 2011). I therefore control for external auditor identity (*Big auditor*) and whether a firm receives a modified (nonstandard) opinion on its annual report (*MAO*) (Kinney & McDaniel, 1989). *Big auditor* is coded 1 if a firm hires one of the international Big Four auditors, or the six largest national auditors by revenue to audit its financial reports.²⁵ Board independence or the ratio of outside directors (*Outside directors*) is a commonly used variable in evaluating the strength of corporate governance and has been found to be associated with a lower probability of financial misreporting (Cao et al., 2012; Kryzanowski & Zhang, 2013). I also control for the existence of an audit committee within the firm (*Audit committee*), which is a dummy variable, and the financial expertise of the board (*AF background*), which is measured by the proportion of board members who have either accounting or financial background, following a large literature that examines the impact of these two factors on earnings/financial reporting quality (e.g., DeFond & Jiambalvo, 1991; Agrawal & Chadha, 2005; Firth et al., 2011). Finally, I control for the equity ownership by the largest blockholder (*Top shares*) following Firth et al. (2011).

Detailed descriptions of the key variables used in this chapter are listed in Table 4.2.

²⁵ Inevitably, it is a subjective judgment as to how many auditors are deemed to be big auditors. As a robustness check, I alternatively classify the largest eight (Chen et al., 2011) or the largest 15 auditors (Firth et al., 2011) as big auditors. The main findings are robust to these alternative definitions.

Table 4.2 Descriptions of key variables

Variable	Description
Dependent variables	
Misstate	Dummy variable that equals 1 if a firm misstates its annual financial report in a given period (and therefore has to restate the financial report in a later period); zero for control firms
Cumulative abnormal returns (CAR)	Equals the sum of the daily abnormal returns over the event window, where daily abnormal returns are calculated using the market-adjusted model.
Abnormal return variance (ARV)	Equals the average of the squared market-adjusted daily return over the event window scaled by the stock return variance over the estimate window [-120, -21].
Abnormal trading volume (ATV)	Equals the average of the daily trading volume over the event window scaled by the average daily trading volume over the estimate window [-120, -21].
Abnormal bid-ask spread (ABAS)	Equals the average of the hourly relative spread (i.e., absolute spread divided by the average of bid and ask) over the event window scaled by the average of the hourly relative spread over the estimate window [-120, -21].
Key independent variables	
Family	Dummy variable that equals 1 if the ultimate largest shareholder in a firm is a family (all family member ownership combined); zero otherwise
Post	Dummy variable indicating post-restatement period
Ownership wedge	The difference between control rights and cash flow rights of the ultimate largest shareholder
Opacity index	An index that ranks four components, <i>trading volume</i> , <i>analyst coverage</i> , <i>zero-return trading days</i> , and <i>stock return volatility</i> in deciles and divides the sum of the four components by 40, resulting in an opacity index between 0 and 1. A higher value of opacity index indicates that a firm's information is more opaque.
Firm characteristics	
Firm size	Natural log of total assets
Leverage	Total liabilities / total assets
ROA	Net income / total assets
Top share	The proportion of equity ownership by the largest shareholder
Outside directors	Number of independent directors / total number of directors
Big auditor	Dummy variable that equals 1 if a firm's annual report is audited by one of the largest 10 auditing firms in China; zero otherwise
MAO	Dummy variable that equals 1 if a firm receives a modified (qualified) audit opinion on its annual report; zero otherwise
Negative EPS	Dummy variable that equals 1 if a firm has a negative EPS (earnings per share); zero otherwise
Reform	Dummy variable that equals 1 if a firm has completed the nontradable share reform; zero otherwise
Audit committee	Dummy variable that equals 1 if there exists an audit committee within the firm
AF Background	The ratio of board members who have either accounting or financial background

4.4 Empirical results

4.4.1 Summary statistics

I report the yearly distribution of restatement sample firms in Table 4.3. Restatements by family-controlled firms account for 36 of the total 151 restatements (or 23.8%) in the sample. On average about 3.0% of family-controlled firms restate their financial reports each year (column (d)), which is significantly lower than the overall percentage of restatements at about 4.5% (column (b)). An alternative comparison also shows the lower likelihood of restatement by family-controlled firms than by nonfamily-controlled firms. Across the whole market, family-controlled firms account for about 35.9% of all listed firms during the sample period (column (e)), but restatements by family firms represent only about 23.8% of all restatements announced (column (f)). Even in the year 2008, when the ratio of family restatements to all restatements is at its highest level, only less than one third (31.8%) of all restatements are announced by family-controlled firms.

Table 4.4 presents the summary statistics of the characteristics of the restatement and matching firms. Family firms account for about 23.8% of the restatement firms and about 33.8% of the matching firms. In other words, compared to matching firms, restatement firms are less likely to be family firms. The difference is significant at the 1% level. Restatement firms on average are slightly smaller than matching firms as measured by total assets. Restatement firms have a substantially higher debt level than matching firms, which is consistent with prior studies (e.g., Kinney & McDaniel, 1989; DeFond & Jiambalvo, 1991). Firms with net loss in the prior year (*Negative EPS*) are significantly more likely to misstate their financial reports. This is not surprising because loss-making firms have strong

incentives to manipulate their accounting numbers in order to conceal their true financial performance and/or to avoid the ST designation.

Noticeably, there are no significant differences between restatement firms and matching firms in several key corporate governance variables, such as board independence, the existence of an audit committee, and board members' accounting and financial expertise. These variables are found to be negatively associated with the likelihood of misstatements in Western countries (Agrawal & Chadha, 2005, Cao et al., 2012; Kryzanowski & Zhang, 2013). The data thus indicates that these corporate governance mechanisms fail to deter Chinese firms from misstating financial reports. Consistent with prior studies, restatement firms are less likely to hire a big external auditor and more likely to be issued with a modified auditor's opinion prior to misstatement.

4.4.2 Family control and restatements

I test the first hypothesis by estimating the regression model specified in Eq. (4.1) and report the results in Table 4.5. The dependent variable in both columns (1) and (2) is the likelihood of a firm misstating its financial report. In column (1), where the family control dummy is the only independent variable other than year and industry fixed effects, I find that family control has a significant and negative effect (coef. = -0.744, $p = 0.010$) on accounting restatements. In column (2), I control for a set of variables including firm-specific characteristics, auditor attributes, and firm performance. The coefficient of *Family* remains negative and significant, although its magnitude (-0.733 vs. -0.744) and statistical significance ($p = 0.018$ vs. $p = 0.010$) become slightly lower.

These findings provide support for H1 that family control affects the likelihood of mandatory accounting restatements. Specifically, the results indicate that controlling families have greater concern for reputation than nonfamily blockholders. The larger reputation-related loss from mandatory restatements will deter family firms from misstating their financial reports at least not to the level that is likely to trigger enforcement actions from regulators.

In other word, with respect to whether or not to attempt a misstatement, controlling shareholders face a “tradeoff” between short-run benefits and long-run reputation loss which may result in higher future cost of capital (Qian & Yeung, 2014). As the reputation loss from mandatory restatements will be difficult to recover and family firms are more concerned with reputation than nonfamily firms, it thus reduces the likelihood of mandatory restatements from family firms.

With respect to control variables, the results are mostly consistent with the univariate statistics reported in Table 4.4. The main differences are for firm size and auditor quality. Neither the coefficient of *Firm size* nor *Big auditor* in Table 4.5 is significant, indicating that these two factors do not significantly affect the likelihood of accounting restatements after controlling for family control and other firm-specific factors. Although these two variables are found to be different between misstatement firms and control firms in Table 4.4, these results shouldn't be too surprising because the difference in firm size and auditor quality between these two group of firms is only marginal ($p = 0.093$ and $p = 0.088$, respectively, in Table 4.4).

Table 4.3 Sample distribution

This table reports the distribution of sample firms (restatement firms only) by year and by whether they are family-controlled firms.

Year	Number of restatements	Ratio of restatements all listed firms (%)	Number of family restatements	Ratio of family restatements to all family firms (%)	Ratio of family firms to all listed firms (%)	Ratio of family restatements to all restatements (%)
	a	b	c	d	e	f
2004	10	3.0	1	1.1	26.6	10.0
2005	31	7.9	4	3.5	29.2	12.9
2006	26	6.1	7	5.7	29.1	26.9
2007	16	3.4	4	2.7	31.9	25.0
2008	22	4.1	7	3.4	38.4	31.8
2009	20	3.4	6	2.4	41.4	30.0
2010	26	4.1	7	2.4	45.0	26.9
Total	151	4.5	36	3.0	35.9	23.8

Table 4.4 Univariate analyses on mean differences between misstatement firms and matching firms

All variables are defined in Appendix. *P*-values based on one-tailed t-tests are reported in parentheses. *, ** and *** indicate significance at the 10%, 5% and 1% levels, respectively.

	Misstatement firms		Matching firms		Diff. in means
	(1)		(2)		(3) = (1) - (2)
	Mean	Std. Dev.	Mean	Std. Dev.	
Family	0.238	0.043	0.338	0.048	-0.100*** (0.009)
Firm size	20.767	0.906	20.957	1.044	-0.190* (0.093)
Leverage	0.903	0.808	0.690	0.953	0.213** (0.012)
ROA	0.024	0.014	0.024	0.013	0.000 (0.979)
Top shares	0.215	0.140	0.242	0.162	-0.027*** (0.006)
Negative EPS	0.264	0.442	0.113	0.318	0.151*** (0.000)
Reform	0.528	0.501	0.572	0.496	-0.044 (0.216)
Outside directors	0.359	0.059	0.360	0.065	-0.001 (0.941)
Big auditor	0.205	0.406	0.265	0.443	-0.060* (0.088)
MAO	0.179	0.384	0.033	0.180	0.146*** (0.000)
Audit committee	0.464	0.500	0.470	0.501	-0.006 (0.454)
AF background	0.290	0.227	0.317	0.196	-0.027 (0.139)
Obs.	151		151		

Table 4.5 Family control and the likelihood of a firm misstating its financial report

This table presents logistic regression results of the likelihood of a firm misstating its financial report on family control. *P*-values based on White standard errors are reported next to coefficients. *, ** and *** indicate significance at the 10%, 5% and 1% levels, respectively.

Dependent variable:	Misstate			
	(1)		(2)	
	coefficient	<i>p</i> -value	coefficient	<i>p</i> -value
Family	-0.744***	0.010	-0.733**	0.018
Firm size			-0.211	0.187
Leverage			0.136**	0.032
ROA			-7.434	0.516
Top share			-1.734**	0.046
Negative EPS			0.435**	0.014
Reform			0.266	0.289
Outside directors			0.790	0.724
Big auditor			-0.259	0.148
MAO			2.187***	0.000
Audit committee			-0.079	0.810
AF background			0.515	0.422
Constant	0.071	0.962	3.850	0.269
Year effect	Included		Included	
Industry effect	Included		Included	
Pseudo R-squared	2.12%		7.53%	
Wald Chi2	5.48**		28.68***	
Obs.	302		302	

4.4.3 Family control and market reactions to restatements

4.4.3.1 Short-term reactions

In this subsection, I test H2 in two steps. I first compare short-term market reactions to family firm restatements and with reactions to nonfamily firm restatements. Univariate tests are done over three event windows, $[0, +1]$, $[-1, +1]$, and $[-3, +3]$, with day 0 being the announcement day. The results are reported in Table 4.6. I then use market reactions during the window $[-1, +1]$ as the dependent variables to estimate the baseline regression model, as specified in Eq. (4.2), and report the regression results in Table 4.7. In unreported tests, I use market reactions over windows $[0, +1]$ and $[-3, +3]$ as dependent variables and find that the main findings remain qualitatively unchanged.

Short-term market reactions, measured by CAR, ARV, ATV, and ABAS, to all restatements, family firm restatements, and nonfamily restatements are reported in column (1), column (2), and column (4), respectively. Consistent with my expectation, CARs are negative while ARVs, ATVs, and ABASs are all positive for both family firm restatements and nonfamily firm restatements. All the p -values in column (3) and column (5) are significant at the 1% level, with only one exception (CAR $[0, +1]$ for nonfamily firm restatements) which is significant at the 5% level. These statistics show that accounting restatements are associated with significantly negative short-term abnormal stock returns and increased investor uncertainty about the firms' future performance.

My focus is the differences in market reactions to family firm restatements and nonfamily firm restatements as reported in column (6). As can be seen, compared to restatements announced by nonfamily firms, restatements announced by family firms are associated with

more negative short-term abnormal stock returns. For example, over the three-day window, CAR [-1, +1] is -3.601% for family firm restatements but only -1.660% for nonfamily firm restatements. The difference is significant at the 5% level ($p = 0.034$). The differences for the other three measures are all significant as well. For example, ARV [-1, +1] for family firm restatements is 1.791, which is significantly larger than ARV [-1, +1] for nonfamily firm restatements ($p = 0.039$).

In summary, the data in Table 4.6 shows that although both family firm restatements and nonfamily firm restatements result in negative short-term abnormal stock returns and increased uncertainty among investors about the restatement firms' future performance, the consequences are significantly more serious for family firm restatements.

I further test H2 with multivariate regressions and report the results in Table 4.7. The purpose here is to test any differences in market reactions between family firm restatements and nonfamily firm restatements, and thus the sample in Table 4.7 contains all restatement firms but no matching firms. I run four sets of regressions using CAR, ARV, ATV, and ABAS, as the dependent variable, respectively. For each of the four market reaction measures I estimate two regression models: one uses the family control dummy as the only independent variable, apart from year and industry fixed effects, and the other model also includes a set of control variables.

As can be seen from Table 4.7, the coefficient of *Family* is significant in all eight model specifications. The sign of the coefficient is consistent with the statistics reported in column (6) of Table 4.6. Specifically, the coefficient of *Family* is negative when CAR is the dependent variable and is positive when ARV, ATV, or ABAS is the dependent variable. The

magnitude of the coefficient of *Family* becomes even larger when control variables are included in the regression, e.g., -2.181 in column (2) compared to -1.777 in column (1).

Taken together, the findings in Table 4.6 and Table 4.7 indicate that when a firm is forced to restate its financial report, being family-controlled is associated with significantly more negative short-term stock returns (CAR), higher abnormal return variance (ARV), higher abnormal trading volume (ATV), and larger abnormal bid-ask spread (ABAS). These findings validate H2 that family control matters for market reactions to restatements.

The results confirm my analysis that investors are more concerned about the deterioration in accounting earnings quality in family firms and consequently react more strongly to restatements by family firms than those by nonfamily firms. Recall the result in section 4.4.2 in which family firms are less likely to restate their financial reports than nonfamily firms, the results in this section thus suggest that once a family firm restates its financial report investors quickly adjust their perception about the balance between controlling family's reputation concern and potential more serious type II agency problems. Specifically, investor concern about controlling family's type II agency problems overweighs reputation concerns after the restatement.

The results can also be explained by "trade-off" theory discussed in section 4.4.2. The trade-off theory suggests that when a family firm conducts a material restatement, the short-run private benefits must outweigh the higher long-run capital costs. Investors are aware of the potential risk and respond more negatively to mandatory restatements by family firms than to those by nonfamily firms.

Table 4.6 Comparison of market reactions to restatements by family firms and by nonfamily firms

This table presents univariate tests of the different market reactions to restatements announced by family firms and by nonfamily firms, for short windows surrounding announcements (column 6). CAR is the cumulative abnormal return. ARV is the abnormal return variance. ATV is the abnormal trading volume. ABAS is the abnormal bid-ask spread. This table also tests whether the market reactions are different from zero for restatements by family firms and nonfamily firms, respectively. *P*-values in columns (3) and (5) are based on $H_0=0$ (CAR) and $H_0=1$ (ARV, ATV, and ABAS). Significances are based on *p*-values using the two-tailed t-test, except for those in column (6) which are based on one-tailed t-test.

	All restatements	Family firm restatements	<i>p</i> -value	Nonfamily firm restatements	<i>p</i> -value	Diff. in means	<i>p</i> -value (H0: Diff = 0)
	(1)	(2)	(3)	(4)	(5)	(6) = (2) – (4)	(7)
CAR [0, +1] (%)	-1.481	-2.603	0.001	-1.130	0.016	-1.473**	0.044
CAR [-1, +1] (%)	-2.122	-3.601	0.001	-1.660	0.004	-1.941**	0.034
CAR [-3, +3] (%)	-2.665	-4.575	0.006	-2.067	0.003	-2.508*	0.056
ARV [0, +1]	2.661	2.700	0.000	2.221	0.000	0.479**	0.024
ARV [-1, +1]	1.499	1.791	0.000	1.408	0.000	0.383**	0.039
ARV [-3, +3]	1.538	1.898	0.000	1.437	0.008	0.461**	0.030
ATV [0, +1]	1.462	1.949	0.000	1.310	0.000	0.639**	0.012
ATV [-1, +1]	1.401	1.924	0.000	1.238	0.000	0.686***	0.005
ATV [-3, +3]	1.432	2.019	0.000	1.248	0.000	0.771***	0.005
ABAS [0, +1]	2.508	2.793	0.000	1.588	0.002	1.205**	0.045
ABAS [-1, +1]	2.323	2.633	0.000	1.324	0.007	1.309**	0.021
ABAS [-3, +3]	2.127	2.395	0.000	1.262	0.009	1.133***	0.008

Table 4.7 Family control and market reactions surrounding restatement announcements

This table presents regression results of short-window market reactions surrounding restatement announcements on family control. All variables are defined in Appendix. *P*-values based on White standard errors (White, 1980) are reported in parentheses. *, ** and *** indicate significance at the 10%, 5% and 1% levels, respectively.

Dependent variables:	Cumulative abnormal return CAR [-1,+1]		Abnormal return variance ARV [-1, +1]		Abnormal trading volume ATV [-1, +1]		Abnormal bid-ask spread ABAS [-1, +1]	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Family	-1.777** (0.032)	-2.181** (0.011)	0.376** (0.045)	0.396** (0.049)	0.716*** (0.000)	0.771*** (0.000)	1.817** (0.049)	1.911** (0.038)
Firm size		1.293 (0.430)		-0.243 (0.292)		-0.154 (0.434)		-0.999** (0.020)
Leverage		-0.884** (0.031)		0.221** (0.039)		0.120* (0.065)		0.052 (0.764)
Top share		0.041* (0.066)		-0.427 (0.583)		0.402 (0.532)		-0.729 (0.804)
Negative EPS		-1.468* (0.097)		0.256* (0.061)		0.064 (0.852)		1.090 (0.271)
MAO		-1.075 (0.113)		0.460* (0.098)		0.268** (0.055)		1.200* (0.095)
Outside directors		0.052 (0.894)		0.080 (0.665)		0.025 (0.876)		-0.021 (0.751)
Constant	-0.717* (0.060)	-5.610* (0.076)	1.409*** (0.000)	-3.548** (0.045)	1.231*** (0.000)	-2.043* (0.066)	1.534*** (0.001)	23.340** (0.015)
Year effect	Included	Included	Included	Included	Included	Included	Included	Included
Industry effect	Included	Included	Included	Included	Included	Included	Included	Included
Obs.	151	151	151	151	151	151	151	151
Adj. R-squared	3.14%	7.93%	5.52%	6.41%	12.84%	14.46%	2.90%	15.19%
F-statistic	4.69**	2.74**	7.66***	2.66**	12.78***	2.65**	2.11**	1.75**

4.3.2 Corporate information opacity and the impact of family control

In this subsection I perform additional tests to examine whether the level of information opacity of the restatement firm has any effect on the relationship between family control and short-term market reactions (i.e., H3). The tests are based on regression models specified in Eq. (4.3). More specifically, I add to the baseline regression models specified in Eq. (4.2) a stand-alone variable as a proxy for information opacity and its interaction with family control. The regression results are reported in Table 4.8.

As in Table 4.7, I run four sets of regressions using CAR, ARV, ATV, and ABAS, as the dependent variable, respectively. And for each dependent variable I estimate two regression models: one uses the ultimate largest shareholder's control-ownership wedge as the proxy for information opacity and the other uses a comprehensive opacity index as the proxy.

In each of all eight models, the coefficient of *Family* remains significant and keeps the sign as its corresponding coefficient in Table 4.7. The results indicate that even for firms with low information opacity (i.e., firms of which the controlling shareholders are less likely to extract private benefits of control), family control is still associated with more negative investor reactions. The coefficient of the stand-alone variable *Ownership wedge* is significant across all four models and has the same sign as that of *Family*. This indicates that control-ownership wedge, similar to family control, also increases investor concern about agency problem and uncertainty. The coefficient of the stand-alone variable *Opacity index*, although having the same sign as that of *Ownership wedge* is not significant across all four models.

My main interest is the interaction terms *Family*Ownership wedge* and *Family*Opacity index*, which capture the incremental effect of information opacity on market reactions to family firm restatements. The coefficient of either *Family*Ownership wedge* or *Family*Opacity index* is statistically significant in all of the eight model specifications. The coefficients of the interaction terms have the same sign as the corresponding coefficients of the stand-alone *Family*, i.e., negative when CAR is the dependent variable and positive when ARV, ATV, or ABAS is the dependent variable.

Overall, the findings in Table 4.7 support H3 that the more negative market reactions to family firm restatements become even more pronounced as the restatement firm's information opacity increases. The results suggest that as the restatement firm's information opacity increases, investors have even greater concerns about controlling shareholder's credibility, agency problems, and uncertainty following restatements. This will further reinforce the impact of family control on market reactions to restatement announcements.

4.4.4 Additional tests

4.4.4.1 The timeline

To investigate the effect of restatement over the longer term, I perform two sets of tests in this subsection. I first follow up the tests in Section 4.4.3 to compare the difference in market reactions (i.e., return variance, trading volume, and bid-ask spread) before the restatement announcement (window [-120, -21]) and after announcement (window [+21, +120]), for family restatement firms and nonfamily restatement firm, respectively. See Figure 4.1A for the timeline. I then follow the large body of literature to examine the drop in the information content of earnings as measured by earnings response coefficient (or ERC) after the

restatement announcement, by comparing the ERC in one year before and one year after the restatement announcements. Because I only have annual earnings data, I focus on yearly ERC rather than quarterly ERC, as in some prior studies such as Wilson (2008) and Chen, Cheng, and Lo (2014). See Figure 4.1B for the timeline.

4.4.4.2 Longer-term market reactions

In subsection 4.4.3.1, I examine the differences in market reactions to family firm restatements and nonfamily firm restatements over three short-term windows, $[0, +1]$, $[-1, +1]$, and $[-3, +3]$. In this subsection, I test if the stronger market reactions to family firm restatements are still observed over a longer period. The literature provides mixed empirical evidence on whether the effects of restatements (e.g., the drop in ERC) are short-lived (e.g., Wilson, 2008; Chen et al., 2014). Although it is not my intention to find out exactly how long the effects of restatement last, the tests I perform in this subsection may provide complementary evidence to enhance our understanding of the issue.

I first adopt a difference-in-difference approach. I compare the pre- and post-restatement stock return variance, trading volume, and bid-ask spread for restatement firms and matching firms (i.e., nonrestatement firms), respectively. I then compare the changes (from pre- to post-restatement period) in these three measures between restatement firms and matching firms. Because I identify each matching firm based on industry, size, IPO year, and stock exchange, such a comparison also controls for the influence of these factors. The results are reported in Panel A of Table 4.9. The left-hand side of Panel A presents the results for 36 family restatement firms and 36 matching firms. The right-hand side presents the results for 115 nonfamily restatement firms and their corresponding matching firms. The pre- and post-

restatement estimation window is $[-120, -21]$ and $[+21, +120]$, respectively, where day 0 is the restatement announcement day.

To illustrate my findings, I take daily stock return variance as an example. For family restatement firms, the average return variance increases significantly from 3.311 in the pre-restatement estimation window to 3.628 in the post-restatement window (diff. = 0.317, $p = 0.008$). During the same period, although the matching firms also experience an increase in return variance, their increase is insignificant (diff. = 0.129, $p = 0.182$). The difference in the change in return variance (or difference-in-difference, marked in bold font in Panel A) between family restatement firms and their matching firms is statistically significant (diff. = 0.188, $p = 0.048$). In contrast, although nonfamily restatement firms also experience a significant increase in return variance from 3.201 to 3.306 (diff. = 0.105, $p = 0.078$), the difference-in-difference is insignificant ($p = 0.455$) between nonfamily restatement firms and their matching firms.

These difference-in-difference analyses indicate that while family restatement firms experience a significant increase in stock return variance over a longer window (up to 120 days after the restatement announcement in my tests) compared to their nonrestatement matching firms, there is no significant difference in the change in return variance between nonfamily restatement firms and their matching firms. The results are similar if I look at the changes in trading volume and bid-ask spread.

I next perform tests to directly compare the changes in return variance, trading volume, and bid-ask spread between family restatement firms and nonfamily restatement firms, in addition

to comparing the changes between each group of restatement firms and their corresponding nonrestatement matching firms. The results are reported in Panel B of Table 4.9.

I again take stock return variance as an example to illustrate the findings. For both family restatement firms and nonfamily restatement firms, their return variance in the post-restatement period is significantly larger than that in the pre-restatement period ($p = 0.008$ for family firms and $p = 0.078$ for nonfamily firms). When I look at the difference in the change, it can be seen that the increase in return variance is significantly larger for family firms than for nonfamily firms (diff. = 0.212, $p = 0.030$). In other words, the impact of restatement announcement on return variance increase is more pronounced for family restatement firms than for nonfamily restatement firms. Comparisons in trading volume and bid-ask spread yield similar results.

Overall, the findings in Table 4.9 indicate that while both family restatement firms and nonfamily restatement firms experience an increase in return variance, trading volume, and bid-ask spread following restatement announcement, the impact is substantially more significant for family restatement firms. In fact, there is no significant difference in these three measures between nonfamily restatement firms and their matching firms up to 120 days after the restatement announcement. But for family restatement firms, the increases are still observed.

Table 4.8 Expropriation risk and the impact of family control on market reactions to restatement announcements

This table presents regression results of how the impact of family control on short-window market reactions surrounding restatement announcements is affected by the potential risk of expropriation by controlling families. The potential expropriation risk is measured by control-ownership wedge and corporate opacity. All variables are defined in Appendix. *P*-values based on White standard errors (White, 1980) are reported in parentheses. *, ** and *** indicate significance at the 10%, 5% and 1% levels, respectively.

Dependent variables:	Cumulative abnormal return CAR [-1, +1]		Abnormal return variance ARV [-1, +1]		Abnormal trading volume ATV [-1, +1]		Abnormal bid-ask spread ABAS [-1, +1]	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Family	-1.148* (0.053)	-3.947* (0.052)	0.679** (0.023)	1.821** (0.022)	0.900*** (0.000)	1.099* (0.091)	0.538* (0.092)	3.123** (0.030)
Family * Ownership wedge	-0.106** (0.042)		0.752** (0.026)		0.430** (0.035)		1.023** (0.046)	
Family * Opacity index		-4.252* (0.064)		2.696** (0.045)		0.929* (0.086)		8.610** (0.020)
Ownership wedge	-0.106** (0.029)		0.181* (0.057)		0.101* (0.063)		1.182** (0.033)	
Opacity index		-3.668 (0.204)		0.757* (0.093)		1.229 (0.430)		8.583** (0.020)
Firm size	1.031 (0.157)	1.333 (0.277)	-0.207 (0.358)	-0.310 (0.210)	-0.160 (0.416)	0.255 (0.225)	-1.344* (0.096)	-1.503* (0.067)
Leverage	-0.833* (0.059)	-0.840** (0.048)	0.203* (0.051)	0.227** (0.048)	0.119* (0.067)	0.166* (0.063)	0.033 (0.605)	0.030 (0.617)
Top share	0.048** (0.046)	0.041* (0.067)	-0.308 (0.694)	-0.440 (0.569)	0.358 (0.589)	0.471 (0.460)	-1.754 (0.460)	-0.794 (0.794)
Negative EPS	-1.411* (0.098)	-1.425 (0.101)	0.196* (0.074)	0.244** (0.042)	0.071 (0.774)	0.067 (0.798)	0.733 (0.169)	0.601 (0.203)
MAO	-1.340* (0.089)	-1.409* (0.083)	0.491* (0.077)	0.420* (0.094)	0.306 (0.180)	0.438 (0.157)	0.860* (0.092)	1.160* (0.077)
Outside directors	0.044 (0.454)	0.023 (0.690)	0.122 (0.492)	0.120 (0.506)	-0.087 (0.573)	-0.103 (0.375)	0.029 (0.500)	0.013 (0.762)
Constant	4.822** (0.023)	7.315* (0.065)	-3.383** (0.045)	-5.366** (0.028)	-1.777* (0.065)	-2.856** (0.050)	27.956* (0.073)	28.225* (0.060)
Year effect	Included	Included	Included	Included	Included	Included	Included	Included
Industry effect	Included	Included	Included	Included	Included	Included	Included	Included
Obs.	151	151	151	151	151	151	151	151
Adj. R-squared	6.40%	8.58%	4.04%	7.03%	10.77%	14.60%	5.41%	14.53%
F-statistic	2.03**	2.77**	1.93**	2.38**	2.02**	2.42**	1.94**	2.92***

Figure 4.1 Illustration of timeline

Figure 4.1A: Timeline of market reaction tests

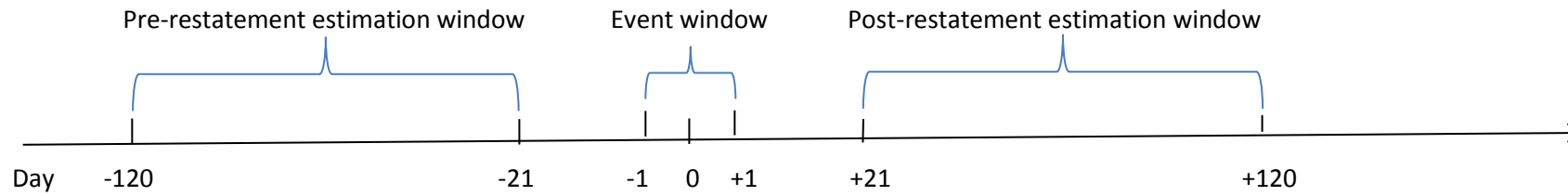


Figure 4.1B: Timeline of earnings informativeness tests

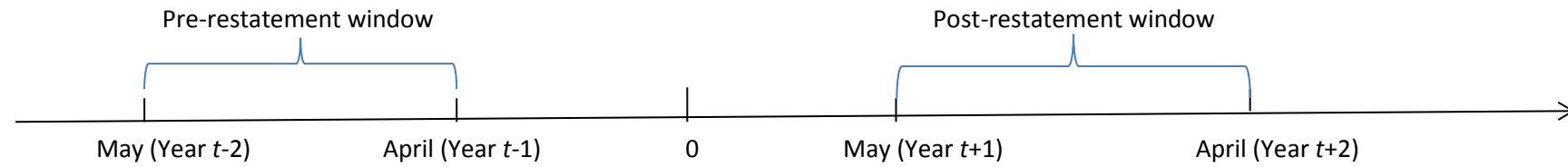


Table 4.9 Longer-term effects of restatement announcements

Panel A: Difference-in-difference tests

Panel A of this table presents the difference-in-difference test results of longer term effects of restatement announcements on market reactions, i.e., daily stock return volatility, daily trading volume, and bid-ask spread. The left-hand side of the table reports the statistics of the family restatement firms (36 firms) and their matching firms. The right-hand side of the table reports the nonfamily restatement firms (115 firms) and their corresponding matching firms. The pre-restatement estimation window is [-120, -21] and the post-restatement estimation window is [+21, +120], with day 0 being the restatement announcement day. Stock return variance is the variance of the residual returns from each firm's market model; trading volume is the number of shares traded on the day divided by the number of *tradable* shares outstanding on that day; bid-ask spread is the average relative spread (i.e., absolute spread divided by the average of bid and ask) over the test period measured in hourly intervals. Significances are based on *p*-values using the one-tailed t-test.

		Family restatement firms				Nonfamily restatement firms		
		Pre-restatement (a)	Post-restatement (b)	(b) – (a) (<i>p</i> -value)		Pre-restatement (a)	Post-restatement (b)	(b) – (a) (<i>p</i> -value)
Stock return variance	Restatement firms (1)	3.311	3.628	0.317*** (0.008)		3.201	3.306	0.105* (0.078)
	Control firms (2)	2.977	3.106	0.129 (0.182)		3.003	3.087	0.084 (0.282)
	(1) – (2)	0.334	0.522	0.188** (0.048)		0.198	0.219	0.021 (0.455)
Trading volume	Restatement firms (1)	2.382	3.196	0.814** (0.030)		2.960	3.052	0.092 (0.340)
	Control firms (2)	2.344	2.678	0.334 (0.122)		2.768	2.896	0.128 (0.288)
	(1)– (2)	0.038	0.518	0.480* (0.054)		0.192	0.156	0.036 (0.411)
Bid-ask spread	Restatement firms (1)	0.236	0.337	0.101** (0.033)		0.217	0.241	0.024 (0.209)
	Control firms (2)	0.209	0.258	0.049* (0.098)		0.222	0.230	0.008 (0.433)
	(1) – (2)	0.027	0.079	0.052* (0.064)		-0.005	0.011	0.016 (0.218)

Panel B: Direct comparison between family restatement firms and nonfamily restatement firms

Panel B presents the statistics using an alternative approach to compare the difference in change in return variance, trading volume, and bid-ask spread between family restatement firms and nonfamily restatement firms. I then compare the changes in these measures between family restatement firms and nonfamily restatement firms, following restatement announcements.

		Pre-restatement (a)	Post-restatement (b)	(b)-(a) (p-value)
Stock return variance	Family firms (1)	3.311	3.628	0.317*** (0.008)
	Nonfamily firms (2)	3.201	3.306	0.105* (0.078)
	(1) –(2)	0.110	0.322	0.212** (0.030)
Trading volume	Family firms (1)	2.382	3.196	0.814** (0.030)
	Nonfamily firms (2)	2.960	3.052	0.092 (0.340)
	(1) –(2)	-0.578	0.144	0.722* (0.057)
Bid-ask spread	Family firms (1)	0.236	0.337	0.101** (0.033)
	Nonfamily firms (2)	0.217	0.241	0.024 (0.209)
	(1) –(2)	0.019	0.096	0.077* (0.051)

4.4.4.3 Information content of earnings (ERC)

Earnings response coefficient (ERC) is the most commonly used empirical measure of information content of earnings and a popular proxy for earnings quality (Dechow et al., 2010). A large number of studies document a significant drop in the ERC after restatement announcements (e.g., Anderson & Yohn, 2002; Wu, 2002; Wilson, 2008; Chen et al., 2014). According to Chen et al. (2014), the key argument underlying the drop in the ERC is that the credibility of financial reporting is lower after the restatement. This argument suggests that the drop in the ERC is expected to be more severe for family restatement firms than for nonfamily restatement firms, because my findings in section 4.4.3 suggest that family restatement firms are subject to greater credibility concerns.

To test my prediction, I follow prior studies (e.g., Fan & Wang, 2002; Chen et al., 2014) to estimate the following model (Equation 4):

$$\begin{aligned} Return_t = & \beta_0 + \beta_1 NI_t + \beta_2 NI_t * Family_t + \beta_3 NI_t * Post \\ & + \beta_4 NI_t * Post * Family_t + \beta_5 NI_t * Firm Size_t \\ & + \beta_6 NI_t * Tobin Q_t + \beta_7 NI_t * Leverage_t + Fixed Effects + \varepsilon_t \end{aligned} \quad (4.4)$$

In this model, $Return_t$ is the cumulative net-of-market 12-month stock returns at year t , calculated from monthly stock returns from May to April (April 30 is the deadline for listed firms in China to release their annual reports). NI_t is the net earnings of year t divided by the market value of equity at the beginning of year t . $Post$ is a dummy variable that indicates the post-restatement financial year. My focus is on the coefficient β_4 . Because the results so far suggest that investors are more concerned about restatements by family firms, I expect post-restatement earnings of family firms will be even less informative than those of nonfamily

firms. Therefore, β_4 is expected to be negative and significant. I report the regression results in Table 4.10.

The tests in Table 4.10 include only restatement firms. The positive and significant coefficient of NI across all columns indicates that stock prices do respond to earnings in the Chinese stock markets. The insignificant coefficient of the interaction term $NI*Family$ (coef = 0.001, $p = 0.999$) in column (1) indicates that prior to restatements, there is no significant difference in the ERC between family and nonfamily firms, despite the fact that family firms are less likely to misstate their financial reports (i.e., family firms have a higher reporting quality) as reported in Table 4.5.

However, the negative and significant coefficient of the interaction term $NI*Family$ in column (2) (coef. = -8.046, $p = 0.000$) indicates that after the restatement announcement, family restatement firms have a significantly lower ERC than nonfamily restatement firms. The results in column (3) confirm the finding in column (2). Although the negative coefficient of $NI*Post$ (coef. = -2.847, $p = 0.000$) indicates that nonfamily restatement firms also experience a significant drop in the ERC after restatement announcements, the drop is substantially more serious for family restatement firms, as demonstrated by the interaction term $NI*Post*Family$ (coef. = -4.304, $p = 0.047$).

Overall, the findings in Table 4.10 confirm my prediction that the drop in the ERC after restatement announcements is more significant for family restatement firms than for nonfamily restatement firms, because family restatement firms are subject to greater credibility concerns than nonfamily restatement firms. The results in Table 4.10 also provide additional support for findings in section 4.4.3.

Table 4.10 Family control and the effect of restatement on the information content of earnings

This table presents regression results of the effect of family control on the impact of restatement on the information content of earnings. The dependent variable is the cumulative net-of-market 12-month stock returns, calculated from monthly stock returns from May to April. Pre-restatement (columns (1)) refers to pre-restatement financial year (Year $t-1$) and post-restatement (columns (2)) refers to post-restatement financial year (Year $t+1$), where Year t refers to the year in which the restatement announcement falls. Post is a dummy variable indicating post-restatement financial year ($t+1$). All other variables are defined in Appendix. P -values based on White standard errors (White, 1980) are reported in parentheses. *, ** and *** indicate significance at the 10%, 5% and 1% levels, respectively.

Dependent variable:	Cumulative net-of-market 12-month stock returns (<i>Return</i>)					
	(1)		(2)		(3)	
	Pre-restatement		Post-restatement		Full sample period	
	coefficient	p value	coefficient	p value	coefficient	p value
NI	32.149***	0.008	40.580***	0.003	31.472***	0.000
NI*Family	0.001	0.999	-8.046***	0.000	0.068	0.604
NI*Post					-2.847***	0.000
NI*Post*Family					-4.304**	0.047
NI*Firm size	1.648***	0.004	1.857***	0.003	1.373***	0.004
NI*Tobin Q	-0.996***	0.001	-0.277	0.153	-0.353**	0.026
NI*Leverage	0.650***	0.001	-0.018	0.976	0.428	0.277
constant	-0.086	0.684	0.619**	0.038	0.334	0.108
Year effect	Included		Included		Included	
Industry effect	Included		Included		Included	
Obs.	151		151		151	
Adj. R-squared	5.03%		51.24%		23.41%	
F-statistic	11.99***		11.32***		3.91***	

4.5 Conclusion and implications

Existing literature has found that family control can either lead to better performance or worse expropriation of minority shareholders. This naturally raises two questions in relation to accounting issues. Are family-controlled firms indeed more likely to have low-quality financial reporting than nonfamily-controlled firms? Does family control affect investor reactions to the revelation of low quality or the deterioration of accounting information quality? These questions are important because of increasing concerns among regulators and other market participants about the widespread and increasing incidence of accounting irregularities, as well as the fact that family-controlled firms represent one of the most prevalent organization forms across the globe. Although the first question attracts increasing academic interest, the second question has so far been largely ignored by researchers.

In this chapter, I examine the impact of family control on the likelihood of a mandatory and material restatement of a firm's financial report and on investor reactions to accounting restatement, with a focus on the latter. I find that, compared to nonfamily firms, family firms are significantly less likely to restate their financial reports, consistent with the notion that controlling families have greater reputation concerns than nonfamily blockholders, which motivates them to stay away from reputation-damaging mandatory restatements.

I also find that following accounting restatements family-controlled firms trigger substantially more negative investor reactions, measured by more negative cumulative abnormal returns (CAR), larger abnormal return variance (ARV), larger abnormal trading volume (ATV), and higher abnormal bid-ask spread (ABAS), over a short window surrounding the restatement announcements. Further tests show that the more negative

investor reactions to family firm restatements are more pronounced when corporate information is more opaque. These findings indicate that following restatement announcements investors quickly rebalance their belief between controlling families' reputation concern and incentives of private benefits of control. Specifically, restatements lower investors' perception of the credibility of accounting information and ultimately the credibility of controlling families, which in turn is likely to increase investors' concerns about the Type II agency problems.

In fact, the significant increases in return variance, trading volume, and bid-ask spread in family restatement firms are still observable 120 days after the restatement announcements; but these effects of restatements disappear for nonfamily restatement firms during the same period. Moreover, an examination of the ERC indicates that, after restatement announcements, investors perceive accounting earnings of family firms to be less informative than those of nonfamily firms.

My findings have two important implications. At the firm level, this study suggests that family-controlled firms should promote a high quality of financial reporting practice with greater efforts than nonfamily-controlled firms, in order to avoid the severe penalties imposed by the market. At the policy level, to maximize the benefits of accounting information in reducing market frictions and in facilitating the development of a resilient stock market, regulators should take measures to encourage the adoption of credible reporting by all listed firms, as well as enhancing the market perception of the trustworthiness of corporate insiders by, for example, strengthening investor protection.

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Chapter Five Conclusion

In this thesis, I investigate the implications of family control for corporate governance in the Chinese markets. My investigation is focused on three important aspects of corporate governance practice, namely controlling shareholders' tunneling behaviour, shareholder-debtholder agency issues, and financing reporting quality. Empirical evidence shows that firms controlled by families differ systematically from those controlled by nonfamilies and those without effective controlling shareholders in these governance practices. The main results of this thesis are as follows:

5.1 Implication for controlling shareholder's tunneling

In Chapter 2, I examine whether and how blockholders' tunneling behavior differs between family and nonfamily firms. Because prior studies find that even for family firms agency conflicts can differ between those managed by founders and those managed by descendants, I in this chapter focus on founder-manager firms to avoid unnecessary complication. As family firms of modern sense are in their early development stage in China, the majority of family firms are still managed by founders. Thus, my sample founder-manager firms are good representatives of overall family firms in China.

Empirical evidence shows that, relative to firms without founder-managers, those with founder-managers have significantly less tunneling. This finding is robust to controlling for the divergence between controlling shareholders' control rights and cash flow rights (i.e., control-ownership wedge). This result is consistent with the notion that founder-managers

have greater concerns for reputation and greater incentives to pass on a successful family business to future generations, which motivate them to better align their own interest with that of outside investors.

I further investigate how the impact of family control on tunneling is influenced by founder-manages' political connectedness. The results show that the impact of political connection (PC) on the relationship between founder-manager and firm tunneling depends on the type and the hierarchy level of PC. Specifically, the negative association between founder-manager and firm tunneling is further strengthened when founders have CPC/PPCC-type of PC and especially when such a PC is at the central level; while official-type PC at the local level has little effect.

Chapter 2 contributes to the literature by identifying a channel (i.e., firm tunneling) through which managers' founder status and political connectedness affect corporate governance and firm performance. It complements prior studies on the impact of managerial attributes on risk-taking, investment policy, and capital structure.

5.2 Implication for firms' debt financing cost

In Chapter 3, I examine the impact of family control on shareholder-debtholder agency conflicts which in turn affects the cost of debt financing, given the importance of debt financing for the development and growth of the private sector of the Chinese economy.

Initial test result shows that family controlled firms on average pay a lower cost of debt than nonfamily firms. This result seems inconsistent with prior cross-country empirical evidence,

which would imply a positive relationship between family control and debt cost in China, a country characterized by weak investor protection. Thus, I propose that the impact of family control on debt cost may be affected by a firm-level factor.

I hypothesize that corporate information opacity plays the moderating role in the relationship between family control and the cost of debt. Specifically, I expect that, relatively to nonfamily firms, family firms enjoy a lower cost of debt when corporate opacity is relatively low, as low opacity indicates the relative dominance of controlling families' alignment incentives. Empirical results support my expectation.

I further hypothesize and empirically demonstrate that the moderating role of corporate opacity is influenced by some other factors such as controlling shareholders' control-ownership wedge, external institutions, and firms' political connectedness, all of which affect controlling shareholders' alignment/entrenchment incentives.

Chapter 3 highlights that controlling families are heterogeneous in terms of their impact on the shareholder-debtholder agency conflicts and consequently on the cost of debt. Debtholders view corporate opacity as an important reference in assessing potential agency conflicts with blockholders. I also demonstrate that firm-level corporate opacity is more important than several previously examined factors (e.g., external institutions, control-ownership wedge, and political connection) in explaining the relationship between family control and the cost of debt.

5.3 Implication for firms' financial reporting quality

In Chapter 4, I examine the impact of family control on the quality of a firm's financial reporting. Specifically, I try to answer two related questions. First, whether financial reporting quality differs between family firms and nonfamily firms; second and more importantly, whether and how investors react differently to the deterioration in financial reporting quality.

Theoretical and existing empirical evidence suggests that the quality of financial reporting of family firms can be either higher or lower than that of nonfamily firms. Using the likelihood of accounting restatement as the proxy for financial reporting quality, I find that family firms are less likely than nonfamily firms to misstate their financial statements, consistent with the notion that controlling families have greater concerns for reputation.

I further reveal that the restatement announcement effect is more negative and stronger for family firms than for nonfamily firms. During a short-window surrounding restatement announcement, family control is associated with more negative stock returns, higher abnormal return variance, larger abnormal trading volume, and larger abnormal bid-ask spread. The loss in the information content of earnings up to 120 trading days after the restatement announcement is significantly greater for family firms than for nonfamily firms.

Before the restatement announcement there is no significant differences in stock return characteristics and earnings informativeness between family firms and nonfamily firms. However, the significant differences after the restatement indicate that the potential more serious Type II agency problems in family firms become the dominant concern for investors.

Consequently, investors react more negatively to restatements by family firms than those by nonfamily firms.

Chapter 4 contributes to the literature by answering an important question. Although prior literature frequently points out families' greater concern for reputation as an important feature of family ownership, little evidence exists on the consequences when such a reputation is impaired. My study supports the notion that reputation is more important for family firms than for nonfamily firms, but from a different perspective.

5.4 Concluding remarks

Family controlled firms play a critical role in economic growth and the development of China's financial market. Due to the unique institutional environment in China, empirical evidence on corporate governance generated from family firms in developed markets and other emerging markets may not be directly applied to the Chinese market.

Overall, I find that Chinese family firms as a whole have a greater concern for reputation, which motivates them to better align their interests with outside investors, including minority shareholders and debtholders. However, the evidence also indicates that controlling families are heterogeneous in terms of their impact of agency conflicts.

Investors, while on one hand recognize controlling families' alignment incentives; still have certain level of concern about the entrenchment potential of family owners. Once family owners' reputation concern is not evidenced or when the reputation is impaired, investors quickly rebalance/adjust their concern for agency conflicts and as a result react accordingly. For family owners, my thesis suggests the importance in building and maintaining a

reputation among investors. The cost of reputation loss could be significantly higher for family firms than for nonfamily firms.