

**OUTSIDERS IN FAMILY FIRMS:
A PERSPECTIVE FROM FINANCING DECISION**

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ABSTRACT

I investigate how the presence of outsiders in the senior management team is related to the financing decision of Chinese listed family firms. For a sample of listed family firms from 2008 to 2017, I find that family firms with more outsiders in their senior management team (including the CEO, vice general manager, CFO, secretary of the board of directors, and other persons specified in the articles of Association) have higher leverage and take on more debt. Further, from the aspect of different financing choices, my empirical analysis shows that family firms with a higher proportion of outsiders take on fewer bank loans but issue more bonds. I use the proportion of outsiders in the firm's senior management team to measure the presence of outsiders in family firms. Besides, for the robustness test, I also use two dummy variables to measure the presence of outsiders in family firms. One indicates whether the family members fully exit from the senior executive team (including board chair, CEO, and CFO), and the other indicates whether the family members fully exit from the senior management team (including CEO, vice general manager, CFO, secretary of the board of directors, and other persons specified in the articles of Association). The results are consistent.

To deal with the potential endogeneity issues, I use the outsiders' full control of the senior executive team of the family firms as an exogenous shock to conduct PSM-DID analysis, and the results still hold.

To conduct a heterogeneity analysis, I investigate factors that could moderate the relation between the presence of outsiders and financing policy in family firms from

the perspective of family firms' expropriation risks. The results show that the positive relationship between the presence of outsiders and the issue of bonds are both more pronounced for family firms with a higher amount of related party transactions, and for family firms with higher other receivables.

My study shows that the presence of outsiders in family firms has a significant impact on firms' financing decisions. In specific, the presence of outsiders leads to significantly higher leverage in family firms, fewer bank loans, and a larger amount of bond issuance. Considering the superiority of bonds to bank loans in the issuance procedure, amount, maturity, and cost, the positive impact of the presence of outsiders on bond issuance indicates that outsiders help to alleviate family firms' financing constraints and improve financing structure. In addition, the strengthening role of expropriation risks in the positive relation of the presence of outsiders and bonds issuance also provides some implication that the introduction of outsiders in family firms helps to improve family firms' governance structure, alleviate the concerns of creditors, and thus reduce agency conflicts between family shareholders and creditors.

Keywords: Family firms; financing decisions; outsiders.

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CHAPTER 1 INTRODUCTION

1.1 Research Motivation

Family firms form a significant part of most economies (Faccio and Lang, 2002; Morck et al., 2005; Barontini and Caprio, 2006). They are the predominant forms of business in economies around the world, and contribute extensively to gross national products and job creation (IFERA, 2003), especially in China. In 2019, 65% of family businesses in mainland China achieved sales growth, while the global average was 55%. The contribution of private enterprises to the national GDP in China is increasing day by day, and the contribution rate is expected to exceed 60%, of which 85% belongs to family enterprises (PWC, 2021).

In recent years, with the stable support of the economic policy of reform and opening up, family enterprises have flourished and participated in promoting the development of national technological innovation and creating a large number of employment opportunities. Besides, family firms are also important types of enterprises in many other countries and regions around the world. For example, in the United States, 35% (37%) of S&P (Fortune) 500 companies are controlled by families (Anderson and Reeb, 2003; Villalonga and Amit, 2006). Great efforts have been made to investigate the issues of family firms in countries such as the United States, Europe, Latin America, and Asia (Claessens, Djankov, and Lang, 2000; Shleifer and Vishny, 2003; Anderson and Reeb, 2003).

Early studies in this field mainly focus on how family firms are different from non-

family firms in terms of operational performance, corporate governance, information disclosure, and financing activities (Anderson et al., 2003; Anderson and Reeb, 2003; Villalonga and Amit, 2006; Anderson et al., 2009; Gao et al., 2020). Recent studies have paid much attention to the heterogeneity of family firms. Among these studies, many scholars studied the family firms' inheritance and willingness to hire outsiders in their senior management teams.

In Europe, America, Japan, and Southeast Asian countries, many family businesses have passed on for many generations and have survived for more than 100 years. However, in China, due to historical reasons, family firms are mainly controlled by the founders, the first generation. Thus, the inheritance experience is poor in China. In addition, many founders of traditional Chinese family firms will think of their children and relatives when facing inheritance issues. It is difficult to trust "outsiders" who have no blood relationship with themselves. Thus, many Chinese families can't be rich for three generations and many family businesses decline in the process of inheritance.

However, with the development of the Chinese economy and family enterprises in recent years, more and more family firms began to introduce external professionals to participate in firm management, as the presence of outside professionals helps to reduce agency problems and provide professional expertise (Morck et al., 2007). Besides, many family business founders began to exit from the firms' management before officially abdicating their positions, hoping to gradually introduce non-family members as company executives to realize the smooth handover of the company's management rights in the future and reduce the impact on the company caused by the departure of

the founders (Li et al., 2014).

Surprisingly, despite the growing interest in family firms, research on the relation between the presence of outsiders and the financing decision of family firms is limited. Some scholars have investigated the impact of family members' exit on family firm values (Li et al., 2014) and operational performance (Wu et al., 2019). But few studies have investigated the impact of the presence of non-family members on family firms' financing decisions.

For listed firms, the external financing channels are generally divided into two categories: debt financing and equity financing. The former includes bank loans, issuance of bonds, notes payable, and accounts payable, while the latter mainly refers to stock financing. The more financing methods, the more financing opportunities for enterprises to choose from. If an enterprise can obtain commercial credit and bank credit and is also capable of direct financing by issuing stocks and bonds, and financing through discount, leasing, and compensation trade, the enterprise will have more opportunities to raise funds for production and operation.

Prior studies show that generally family members are reluctant to use equity finance because they do not want to dilute their control over the family firms (Ellul, 2009; Keasey et al., 2015). As for debt financing, the state-owned banking sector dominates the financing channel for firms in China (Allen et al. 2017) and the bond market in China is not as mature as that of the developed markets. However, in recent years, with the need for reform, China's bond market has developed gradually. According to the financial market operation released by the People's Bank of China, the

total amount of bond issuance in China showed an upward trend from 2012 to 2020. By December 2020, the number of issuers in Shanghai and Shenzhen stock exchanges in China is 4,686, including 3689 bond issuers in Shanghai Stock Exchange and 997 bond issuers in Shenzhen Stock Exchange.

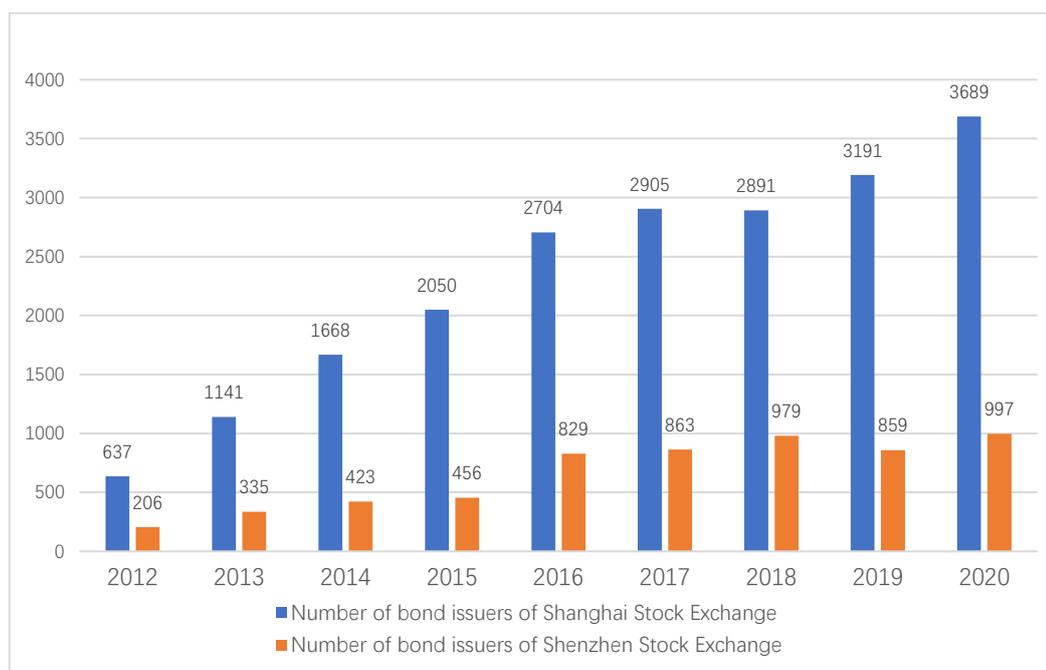


Figure 1. Number of enterprises issuing corporate bonds at China's Shanghai and Shenzhen Stock Exchange.

Data source: China Securities Depository and Clearing Corporation Limited

Therefore, in this study, I try to provide some new empirical evidence by examining the relation between the presence of outsiders and family firms' financing decisions between equity and debt financing, and in addition, between direct debt financing (issuing bonds) and indirect debt financing (obtaining bank loans). In addition, I decide to explore the moderating role of family firms' tunneling activities and expropriation risks on the relation between the presence of outsiders and family firms' financing decisions.

1.2 Research Question

In this dissertation, I examine how the outsiders in family firms' senior management teams would influence firms' financing decisions. Specifically, I investigate the relation between the presence of outsiders in the senior management team (including the CEO, vice general manager, CFO, secretary of the board of directors, and other persons specified in the articles of Association) and the leverage of family firms; and the relation between the presence of outsiders in the senior executive team (including the board chair, CEO, and CFO) and the leverage of family firms.

I find that the presence of outsiders in family firms will lead to higher leverage both when family firms have a higher proportion of outsiders in family firms' senior management team and family firms have no family members in the senior executive team. I predict that the results are due to the reduction of agency problems between family shareholders and creditors.

In addition, I further test whether the presence of outsiders will have some impact on firms' financing choice between direct debt financing (e.g. issuing bonds to the open market) and indirect debt financing (e.g. obtaining loans from banks or other financial institutions). I find that as the presence of outsiders in family firms reduces the agency problems between family shareholders and creditors, family firms will get access to more bonds which are superior to bank loans in capital cost, discretionary decision-making power, supervision, renegotiation, debt amount, maturity, etc.

However, there are potential endogeneity issues due to the reverse causality and omitted variables problems. Thus, to address potential endogeneity issues, I use PSM-

DID examinations to identify the causal relation between the presence of outsiders and the firms' financing policy. Specifically, I use the outsiders' full control of family firms' senior executive team as an exogenous shock and examine these firms' changes in leverage, amount of bank loans, and bonds relative to their counterparts. The examination window is from three years before to three years after a firm's senior executive team becomes fully controlled by outsiders, which means that there are no family members in the firm's senior executive team and the family members exit from the senior management team. Firms with their senior executive team fully controlled by outsiders are the treated group and firms without outsiders in the whole examination window in senior executive teams are the control group. I predict that the relation between the presence of outsiders and family firms' financing policy still holds in DID settings.

To investigate whether the positive relationship between the presence of outsiders and family firms' leverage is due to the reduction of agency problems in family firms, I further conduct a heterogeneity analysis to provide more evidence. In specific, I investigate factors that could moderate the relation between the presence of outsiders and financing policy in family firms from the perspective of family firms' expropriation risks.

In detail, I investigate whether the relation between the presence of outsiders and family firms' financing decisions is stronger when family firms have a higher amount of related party transactions and other receivables. The related party transactions and other receivables are two well-documented proxies for firms' expropriation risks in the

Chinese setting. The results show that family firms with more related party transactions or more other receivables will issue more bonds when they have a higher proportion of outsiders in the firm's senior management team. I find that the presence of outsiders helps to alleviate creditors' concerns about family firms' expropriation risks, therefore, strengthening the relationship between the presence of outsiders and family firms' financing policy.

Taken together, my results support the proposition that the presence of outsiders helps to mitigate the agency problems in family firms, leading to higher leverage, and more bond issuance relative to bank loans. Moreover, the relationship becomes stronger when family firms face higher expropriation risks. The results are consistent when I use the PSM-DID method to deal with the potential endogeneity issues due to the reverse causality and omitted variables problem.

My study shows that the presence of outsiders in family firms has a significant impact on firms' financing decisions. In specific, the presence of outsiders leads to significantly higher leverage in family firms, fewer bank loans, and a larger amount of bond issuance. Considering the superiority of bonds to bank loans in the issuance procedure, amount, maturity, and cost, the positive impact of the presence of outsiders on bond issuance indicates that outsiders help to alleviate family firms' financing constraints and improve their financing structure.

In addition, the strengthening role of tunneling activities and expropriation risks on positive relation of the presence of outsiders and bonds issuance also provide some implication that the introduction of outsiders in family firms helps to improve its

governance structure, alleviate the concerns of creditors, and thus reduce agency conflicts between family shareholders and creditors.

CHAPTER 2 CONCEPTUAL BASIS

2.1 Agency Theory

Different forms of ownership structures produce different forms of agency problems. Typically, there are two types of agency problems.

The first type of agency problem is typical in diffusely held Anglo-American firms. In specific, the central conflict of interest is between the senior management team and shareholders (Jensen and Meckling, 1976; Morck et al., 1988). In these firms, the shareholding structure is highly dispersed, and thus their shareholders are not able to effectively supervise the senior management team. The senior management team may seek private interests and engage in behaviors that harm shareholders' interests. In sum, this kind of agency problem resulting from the conflict of interest between shareholders and managers is the first kind of agency problem and always appears when the firms have a dispersed ownership structure (Jensen and Meckling, 1976; Fama and Jensen, 1983a, 1983b; Jensen, 1986).

Different from that, when firms have concentrated ownership, the agency problem is usually driven by the conflict of interest between the controlling shareholder (or blockholders) and minorities, which is called the second kind of agency problem.

Laporta et al. (1999) and many multinational studies have also shown that the firms' ownership structure is concentrated in some countries in the world, especially in emerging markets (Claessens et al., 2000; Faccio and Lang, 2002). The relatively concentrated form of equity structure and the associated second kind of agency problem

also attract many scholars' attention. In a firm with a concentrated ownership structure, although the agency problem between shareholders and managers is alleviated to some extent, the conflict of interest between controlling shareholders (or blockholders) and minority shareholders becomes severe. Controlling shareholders may use their controlling position to engage in self-interest behavior, resulting in damage to the interests of minority shareholders.

Family firms are typical firms with concentrated ownership structures and face severe second type of agency problems. The conflicts of interest between family members and other minority shareholders are further aggravated through excessive family shareholdings, family members in management and board of directors, and heirs of the family founders in the senior management team (Claessens et al., 2002; Boubakri and Ghouma, 2010; Lin et al., 2011; Bennedsen et al., 2015; Pan and Tian, 2016).

Besides, because family members don't want outsiders to take control of the firms, they are usually reluctant to hire outside professionals (Cao et al., 2015; Xu et al., 2015). In addition, family firms, particularly those with severe agency conflicts, are more likely to suffer from expropriation risks and engage in tunneling activities (Boubakri and Ghouma, 2010; Lin et al., 2011; Pan and Tian, 2016), and thus bear higher financing cost and face financial constraints (Gao et al., 2020).

2.2 Reputation Theory

In recent years, the whole society has paid increasing attention to moral factors and business ethics. For listed firms, corporate reputation has increasingly become one of

the most important strategic resources of various enterprises. Stakeholders care much about corporate reputation and conceptualize it as a durable assessment, recognition, or value judgment of companies (Balmer, 1998; Fombrun, 1996; Fombrun and Shanley, 1990).

Corporate reputation can help firms to gain competitive advantages (Sheehan and Stabell, 2010), act as a key element of business strategy (Carlisle and Faulkner, 2005; Fombrun, 1996; Fombrun and van Riel, 1997), promote corporate innovation (Rogers, 2003), increase wealth (Sims, 2009; Rindova et al., 2005), stimulate growth (Reichheld, 2003), and reduce uncertainty (Fombrun, 1996; Rindova et al., 2005). Prior studies document that family firms have a reputation concern. The reputation concerns in family firms arise from the family's sustained presence and involvement in the firm and its effect on outside parties. Moreover, family firms have a unique internal labor market that potentially creates important reputation concerns. Specifically, family members care much about obtaining senior management positions, board seats, or maintaining voting control rights. This suggests that family members can gain economic benefits from building and maintaining a favorable reputation internal to the family.

As long-term investors, survival and inheritance are keywords in family firms' operational strategy (Anderson et al., 2003; Ellul et al., 2007). To alleviate financing constraints that family firms face especially in emerging markets, family firms are concerned with maintaining a lasting relationship with creditors (Bertrand and Schoar, 2006; Gómez-Mejía et al., 2007). Meanwhile, family firms prefer risk-averse policies, usually take on less debt, and have better information transparency (Shleifer and Vishny,

1986; McConaughy et al., 2001; Gonzalez et al., 2013; Chen et al.,2014; Ma et al., 2017).

Considering undiversified family holdings, the desire to pass the firm onto subsequent generations, and concerns over family and firm reputation, Anderson et al. (2003) state that family shareholders are more likely to value firm survival than strict adherence to wealth maximization.

CHAPTER 3 RESEARCH HYPOTHESES

3.1 The Presence Of Outsiders In Family Firms And Leverage

The topic of corporate governance structure and how corporate governance structure impacts firm behavior has been actively discussed in the literature (Anderson and Reeb, 2004; Huse, 2000; Zahra and Pearce, 1989). Many studies in this area pay much attention to the impact of outsiders on firm behavior. They suggest that outside directors have a positive impact on board effectiveness, firm performance, and firm value (Anderson and Reeb, 2004; McKnight and Mira, 2003; Weisbach, 1988).

As for family firms, the non-family members who work on the board of directors or in the senior executive team are also outsiders in the firm. Using data from non-listed family firms in Spain, Blanca Arosa et al. (2010) find that affiliated directors help to improve firm performance in family firms, and the presence of independents on the board has a positive impact on firm performance especially when the firm is run by the first generation.

In Chinese cases, many studies focus on the impact of outsiders on family firms' financial performance (Li et al., 2014), firm market value, corporate strategy (Yu et al., 2020), financing constraints (Wang and Jin, 2020), research and development expenses (Yu and Wang, 2016), etc. Using the sample of listed family firms in China, empirical evidence shows that the introduction of outside manager significantly improves the performance of the family business (Li et al., 2014; Ye and Wang, 2016) and increases the R&D input (Yu and Wang, 2016).

Prior studies show strong evidence that agency problems have a significant impact on financial structure (Jensen and Meckling, 1976; Berger, Ofek, and Yermack, 1997). As for the impact of outsiders on family firms' financing activities, Wang and Jin (2020) find that both the introduction of external managers and the transfer of enterprises can significantly alleviate the financing constraints of enterprises. Also, existing literature suggests that there is a severe conflict of interest between shareholders and creditors in family firms, and the condition will become further severe when family members have excessive shareholdings, have family representation in management or boards, arrange heirs to participate in firm management (Claessens et al., 2002; Lin et al., 2011; Pan and Tian, 2016; Gao et al., 2020).

However, family firms are usually reluctant to hire professional managers from outside because they don't want to let outsiders take control of the family firms (Cao et al., 2015; Xu et al., 2015). Accordingly, family firms will face more severe agency conflicts between family shareholders and creditors. As a result, empirical results show that family firms will face a higher cost of debt (Boubakri and Ghouma, 2010; Lin et al., 2011; Gao et al., 2020), higher collateral being required by banks (Pan and Tian, 2016), and sometimes will face debt financing constraints. Moreover, Lin et al (2011) provide evidence that the control-ownership wedge has a significantly positive impact on bank loan spreads, and the effect is more pronounced for family firms and firms whose CEO is also a member of the controlling family.

Li et al. (2014) find that the presence of outsiders in the family firms could help to alleviate the agency conflicts between family shareholders and creditors. Acting as a

monitoring role, outsiders could reduce the tunneling activities and risk of expropriation in family firms. The presence of outsiders in family firms could also help to improve information transparency (Wang and Jin, 2020). In addition, Chen et al., (2014) find that improved information transparency results in the increased maturity of their debt and reduced leverage ratios in both family and nonfamily firms, and the effects are more pronounced for family firms. As a result, creditors will be more willing to provide debt to family firms with a higher proportion of outsiders in the senior executive team, board of directors, or even chairman.

From the aspect of family members, family members care much about their control over the firms. As family members are sensitive to the dilution of their stakes, family firms prefer to use debt than equity financing (Ellul, 2009; Keasey et al., 2015).

Family firms in the US have lower debt maturity and higher debt ratios than nonfamily firms (Chen et al., 2014). In Colombia, Gonzalez et al. (2011) find that debt levels are lower when families are involved in firms' management. This negative relation is stronger when the founder remains active as manager, in contrast to when heirs are in charge. For those family firms with a high proportion of outsiders, family members have already decreased their family control over the management and operation, thus they might become more sensitive to their stake-holdings in the firm. Therefore, I predict that family firms with a higher proportion of outsiders in the senior executive team, board of directors, or even an outsider acting as a chairman, will be more likely to use debt than equity for financing.

Thus, given the aversion of family firms to control risk and their greater access to

debt financing, I state the following hypothesis:

H1: Family firms with more outsiders in senior management teams will take on more debt than those with fewer outsiders.

3.2 Choice Between Bank Loans And Bonds

When seeking debt financing, firms can choose direct financing methods, such as issuing bonds to the open market; or they can also choose indirect financings, such as obtaining loans from banks or other financial institutions.

As for the differences between direct debt financing and indirect debt financing, Stulz (1990) and Berger et al. (1997) state that indirect financing may have less discretionary decision-making power of the management than direct financing. Because the creditors of indirect financings, such as banks, are more concentrated and have higher access to private information.

Thus, firms will have more discretion over the use of capital when issuing bonds than obtaining loans. Banks have significant advantages over public creditors in terms of supervision efficiency, access to private information, liquidation efficiency, and renegotiation of financial distress (Fama, 1985; Chemanur and Fulghieri, 1994; Kwan and Carleton, 2004). Thus, from the aspect of firms who need debt financing, using direct debt financing enables them to avoid the stringent credit supervision and debt contract terms of banks (Kwan and Carleton, 2004).

Moreover, prior research shows that bond financing is superior to bank loans in the amount and maturity (James, 1987; Greenbaum and Thakor, 1995). The subject

matter of bonds is often relatively large, and it is difficult for a single bank to provide such a huge size of capital. Also, government policy has a significant impact on bank credit. Once the monetary policy is tightened, commercial banks will first sacrifice the interests of smaller enterprises.

In contrast, bond issuance needs to go through strict approval procedures and high operating costs. Firms generally issue bonds through trust institutions, commercial banks, and securities companies. Thus, although bond financing has some advantages over bank loans, more firms choose to use bank loans than bonds because of the strict approval procedures, especially in China where the bonds market is not as mature as the developed market.

In China, unlike in developed countries, the state-owned banking sector dominates the financing channel for firms (Allen et al. 2017). However, in recent years, with the rapid development of the bond market, bond financing has gradually become an important way of enterprise financing. With the need for reform, China's bond market has developed gradually. In 2020, China has more than 4600 bond issuers, and the annual securities issuance has again created the highest value in recent ten years.

As for family firms, few studies have investigated the factors that could influence the family firms financing choice between bonds and bank loans. I predict that the presence of outsiders will lead to a higher level of bond financing amount in family firms. Because the presence of outsiders reduces agency problem between family members and creditors, helps to improve information transparency, and reduce tunneling activities, family firms with outsiders will be more likely to successfully go

through approval procedures when issuing bonds and face fewer financing restrictions.

Thus, as the superior of bonds to bank loans and the corporate governance effect of the presence of outsiders in family firms, I state the following hypothesis:

H2: Family firms with more outsiders in senior management teams will take fewer bank loans and issue more bonds than those with fewer outsiders.

3.3 Family Firms And Expropriation Risks

There are two competing views about the issue of family firms and the existence of family firms has elicited considerable academic attention.

For one thing, many family firms have reputation concerns and treasure socio-emotional wealth. Family firms care much about inheritance and long-term survival (Anderson et al., 2003; Ellul et al., 2007). To alleviate financing constraints, family firms make a great effort to build a lasting relationship with creditors (Gao et al., 2020). Moreover, family firms are risk-averse and prefer strategies with fewer risks (Shleifer and Vishny, 1986). As for financing choice, prior studies show that family firms take on less debt than non-family firms (McConaughy et al., 2001; Gonzalez et al., 2013; Chen et al., 2014; Gao et al., 2020). As for the corporate information environment, family firms are less opaque (Ma et al., 2017).

For another, some scholars argue that family firms are associated with greater agency problems and expropriation risk. Meanwhile, existing literature provides strong evidence that agency problems affect the financial structure (Jensen and Meckling, 1976; Berger, Ofek, and Yermack, 1997). There is a severe conflict of interest between

shareholders and creditors in family firms as family members may engage in tunneling activities (Boubakri and Ghouma, 2010; Lin et al., 2011; Pan and Tian, 2016)., and the condition will become further severe when family members have excessive shareholdings, have family representation in management or boards, arrange heirs to participate in firm management (Claessens et al., 2002; Lin et al., 2011; Pan and Tian, 2016; Gao et al., 2020). Moreover, to prevent losing control of their firms, family members are usually reluctant to hire professional managers from outside and prefer to hire their relatives to work in the firms (Cao et al., 2015; Xu et al., 2015). Therefore, incorporating these costs into their lending decisions, creditors will provide less capital to family firms or require a higher premium.

Prior studies use two typical measures for the tunneling activities, the other receivables (Jiang et al., 2010) and related party transactions (Cheung et al., 2006; Peng et al., 2011). On the one hand, related party transactions are typical tools to expropriate firm wealth, especially in firms with blockholders, such as family firms. For example, the family shareholders could expropriate firm wealth by selling assets at a price that is lower than the market price to a related party. On the other hand, family shareholders could expropriate by borrowing company assets or cash. In Chinese cases, the accounting item “other receivables” is always used to capture such kinds of borrowings (Jiang et al., 2010).

However, the presence of outsiders will alleviate the agency problems between family members and creditors because outsiders could monitor the family blockholders from tunneling activities. In this case, creditors’ interests are better protected and the

presence of outsiders might change creditors' decisions.

Thus, given the moderating role of outsiders in family firms, I state the following hypothesis:

H3: The positive relation between the presence of outsiders and the issue of bond are both stronger for family firms with a high amount of related party transactions and other receivables.

CHAPTER 4 RESEARCH METHODOLOGY

4.1. Required Data Description

4.1.1 Data And Sample Selection

My sample includes all A-share listed family firms on the Shanghai and Shenzhen Exchanges from 2008 to 2017. I source firms' accounting, ownership, governance structure, and other firm-level data from the China Stock Market and Accounting Research (CSMAR) Database. I exclude financial firms from my sample and require that firms have non-missing information on the data I need. I winsorize continuous variables at 1% and 99% levels. Finally, my sample has 8,481 firm-year observations. In my robustness test part, I also use a sub-sample that only includes family firms with bonds in the open market to test the hypothesis.

4.1.2 Variable Definitions

Dependent variables:

To measure the financing policy of family firms, I use three different dependent variables in the analysis: interest-bearing leverage, bank loan ratio, and bond ratio.

First, interest-bearing leverage, *Lev*, is defined as interest-bearing liabilities divided by the total asset. The interest-bearing liabilities amount is calculated by the total of the year-end balance amount in the following accounts: short-term loans, long-term liabilities due within one year, long-term loans, bonds payable, and long-term payables.

Second, the bank loan ratio, *Loan*, is defined as the amount of the bank loan divided by the total asset.

Third, the bond ratio, *Bond*, is defined as the amount of bond divided by the total asset.

For the robustness test, I also use the logarithm of bank loan and bond amount to re-run the regressions.

Independent variables:

I define three variables to proxy the presence of outsiders in family firms' senior management teams. One is *OutsiderFraction*, the proportion of non-family members (outsiders) in the senior management team. According to Article 216 of the company law, "senior management team" refers to the CEO, vice general managers, CFO, the secretary of the board of directors, and other persons specified in the articles of association. I source the information on firms' senior management teams from the CSMAR database and the definition of the senior management team is the same as in Article 216 of the company law.

The second is *NoFamilyExecutive*, a dummy variable that equals one if there are no family members in the senior executive team of the family firm and zero otherwise. I define the senior executive team as the core management member in the firm including the board chair, CEO, and CFO.

The third is *NoFamilyManagement*, a dummy variable that equals one if there are no family members in the senior management team of the family firm and zero otherwise. The senior management team is the same as defined in the *OutsiderFraction*.

Control variables:

I use five explanatory variables to control for the impacts of firm-level factors on the capital structure and financing policy. Firm size (*Size*) controls a firm's financing flexibility and information asymmetry. *Size* is calculated as the natural logarithm of total assets. The return on equity (*ROE*) and sales growth rate (*SG*) control a firm's operational and growth performance. *ROE* is calculated as net profit divided by equity. *SG* is calculated as the annual increase in sales divided by total sales in the previous year. The largest shareholder's ownership (*Own*) controls conflicts involving shareholders and creditors. *Own* is the shareholdings of the largest shareholder divided by total shares outstanding.

Moderating variables:

To investigate the moderating effect of tunneling activities on the relation between the presence of outsiders and family firms' financing decisions, I use two well-documented measures for tunneling activities, related party transactions (*RPT*) and other receivables (*OR*).

RPT is calculated as the logarithm of the total related party transactions amount. The *RPT* is subject to the related party transactions disclosed in the original financial statement of listed firms. The related party transactions include (1) related parties' transactions with listed firms; (2) transactions between listed firms' related parties. Related parties include: The parent company of the listed company; Subsidiaries of listed companies; Other enterprises controlled by the same parent company as the listed company; Investors who jointly control the listed company; Investors who exert

significant influence on listed companies; Joint ventures of listed companies; Affiliated enterprises of listed companies; The main investors of the listed company and their close family members; Key management personnel of the listed company or its parent company and their close family members; Enterprises under the control, joint control or significant influence of major investors, key managers or close family members of listed companies; Between the related parties of the listed company; etc.

OR is calculated as the logarithm of the year-end balance amount in the other receivables account disclosed in the original financial statement of listed firms. Other receivables mainly include (1) All kinds of compensation and fines receivable. For example, the compensation that should be collected from the relevant insurance company due to accidental losses of enterprise property; (2) Rental of rental packages receivable; (3) All kinds of advance payments that should be collected from employees, such as water and electricity fees paid in advance for employees, medical expenses and rent fees that should be borne by employees; (4) Deposit deposit, such as the deposit paid for renting packaging; (5) Other receivables and temporary payments. (6) Petty cash (the petty cash allocated to the functional departments, workshops, personal turnover, etc. of the enterprise) (7) Transfer in prepayments.

Appendix A summarizes the definitions of the variables used in the analysis.

4.1.3 Descriptive Statistics

Table 1 reports the descriptive statistics. I have 8,481 firm-year observations in my sample.

For all listed family firms in China from 2008 to 2017, the mean *Lev* is 15% and

the median value is 11%.¹ The mean value of *Bond*, which is calculated by the bond amount scaled by asset, is 1%, and the median value is 0. The mean value of *Loan*, which is calculated by loan amount scaled by asset, is 7.71%, and the median value is 0.

The mean value of *OutsiderFraction* is 83% and the median value is also 83%. The mean value of *NoFamilyExecutive* is 10% and the median value is also 0, indicating only 10% of family firms in my sample have no family members in the senior executive team. The mean value of *NoFamilyManagement* is 34.4% and the median value is also 0, indicating only 34.4% of family firms in my sample have no family members in the senior management team.

The mean value of *Size* is 21.54. The mean return on equity (*ROE*) is 8%. The mean sales growth rate (*SG*) is 30%. The mean largest shareholder's ownership (*Own*) is 35.3%. The mean *Board Size* is 2.09. The mean other receivables (*OR*) is 16.49. The mean related party transactions (*RPT*) is 18.44. All of the variables are in a normal range.

¹ For better identification, we use interest-bearing leverage in this dissertation. *Lev* is calculated as Interest-bearing Liabilities scaled by Total Assets.

Table 1. Descriptive statistics.

This table reports the summary statistics of the variables across firm-year observations for all A-share listed family firms on the Shanghai and Shenzhen Exchange. The sample period covers the period 2008 to 2017. I exclude financial firms from my sample. The definitions of all of the variables are provided in Appendix.

Variable	Mean	p10	p25	Median	p75	p90	sd	N
<i>Lev</i>	0.150	0	0.010	0.110	0.240	0.350	0.150	8481
<i>Bond</i>	0.010	0	0	0	0	0.020	0.040	8481
<i>Loan</i>	0.0771	0	0	0	0.0510	0.272	0.180	8481
<i>OutsiderFraction</i>	0.830	0.600	0.750	0.830	1	1	0.160	8481
<i>NoFamilyManagement</i>	0.344	0	0	0	1	1	0.475	8481
<i>NoFamilyExecutive</i>	0.100	0	0	0	0	0	0.300	8481
<i>Size</i>	21.54	20.35	20.79	21.43	22.16	22.91	1.080	8481
<i>ROE</i>	0.080	0.010	0.040	0.080	0.120	0.170	0.100	8481
<i>SG</i>	0.300	-0.150	0	0.150	0.330	0.640	1.020	8481
<i>Own</i>	35.30	17.96	24.22	33.75	44.68	54.17	14.470	8481
<i>Board Size</i>	2.09	1.95	1.95	2.20	2.20	2.20	0.190	8481
<i>OR</i>	16.49	14.33	15.33	16.50	17.71	18.85	2.050	8481
<i>RPT</i>	18.44	14.91	17.41	19.53	20.94	22.14	4.640	8481

Table 2 reports the results of univariate tests between family firms of which *NoFamilyExecutive*=1 and *NoFamilyExecutive*=0. Family firms of which *NoFamilyExecutive*=1 have significantly higher *Lev* and *Bond*, and significantly lower *Loan* than family firms of which *NoFamilyExecutive*=0.

In specific, the mean value of *Lev* of the group that *NoFamilyExecutive*=1 is 17.9%, and the mean value of *Lev* of the group that *NoFamilyExecutive*=0 is 14.3%. The difference is 3.6% and significant at the level of 1%. The mean value of *Bond* of the group that *NoFamilyExecutive*=1 is 1.46%, and the mean value of *Bond* of the group that *NoFamilyExecutive*=0 is 1.00%. The difference is 0.46% and significant at the level of 1%. The mean value of *Loan* of the group that *NoFamilyExecutive*=1 is 5.58%, and

the mean value of *Loan* of the group that *NoFamilyExecutive*=0 is 7.94%. The difference is 2.36% and significant at the level of 1%.

Table 2. Univariate Tests.

In this table, I report the results of univariate tests of key variables between family firms of which *NoFamilyExecutive*=1 and *NoFamilyExecutive*=0. The definitions of all of the variables are provided in Appendix. ***, **, and * correspond to statistical significance at the 1%, 5%, and 10% levels, respectively.

Variable	<i>NoFamilyExecutive</i> =1	<i>NoFamilyExecutive</i> =0	diff	T-statistics
<i>Lev</i>	0.179	0.143	0.036***	6.4952
<i>Bond</i>	0.0146	0.01	0.0046***	3.5425
<i>Loan</i>	0.0558	0.0794	-0.0236***	-3.5847
<i>Size</i>	21.58	21.53	0.05	1.1062
<i>ROE</i>	0.0635	0.0818	-0.0183***	4.7715
<i>SG</i>	0.296	0.306	-0.01	0.2474
<i>Own</i>	31.18	35.74	-4.56***	8.6425
<i>Board Size</i>	2.100	2.092	0.008	1.1574

4.2 Empirical Analysis Method

4.2.1 The Presence Of Outsiders And Financing Policy In Family Firms

(a) The presence of outsiders and leverage in family firms

I begin by presenting panel regressions of the presence of outsiders on leverage and a range of control variables and fixed effects. The main dependent variable is the *Lev* and the independent variable of the presence of outsiders in family firms, *OutsiderFraction*, is the proportion of non-family members in the senior management team of *firm_i* in the previous *year_{t-1}*.

I also use another two independent variables, *NoFamilyExecutive* and *NoFamilyManagement*, for robustness checks. *NoFamilyExecutive* is a dummy variable that equals one if there are no family members in the firm's senior executive team including the chairman, CEO, and CFO, and 0 otherwise. *NoFamilyManagement* is a dummy variable that equals one if there are no family members in the senior management team of the family firm and zero otherwise.

$Controls_{i,t-1}$ includes *Size*, *ROE*, *SG*, *Own*, and *Board Size*, which control the impact of firm-level characteristics on firms' financing decisions. I include industry and year fixed effects to control for unobserved factors affecting the results, and I use robust standard errors.

$$Lev_{i,t} = \alpha + \beta OutsiderFraction_{i,t-1} + \Phi Controls_{i,t-1} + Fixed\ Effects + \varepsilon_{i,t} \quad (1)$$

$$Lev_{i,t} = \alpha + \beta NoFamilyExecutive_{i,t-1} + \Phi Controls_{i,t-1} + Fixed\ Effects + \varepsilon_{i,t} \quad (2)$$

$$Lev_{i,t} = \alpha + \beta NoFamilyManagement_{i,t-1} + \Phi Controls_{i,t-1} + Fixed\ Effects + \varepsilon_{i,t} \quad (3)$$

Table 3 reports the results in this section. I use the *OutsiderFraction* as the independent variable in Columns (1) and (4), *NoFamilyExecutive* in Column (2) and (5), and *NoFamilyManagement* in Columns (3) and (6) for robustness checks. I do not include firm-specific factors in the regressions in Columns (1) - (3) and I add firm-specific factors in the regressions in Columns (4) and (6). All of the control variables are lagged by one period.

Across all six columns, I find that the coefficients on the presence of outsiders are significantly positive. My results indicate that family firms take on more debt and have higher leverage when they have more outsiders involved in their management.

Taking Column (4) as an example, the leverage of family firms with a higher proportion of outsiders in the senior management team is higher than that of family firms with a lower proportion of outsiders in the senior management team by 0.045, when controlling for firm-specific factors and fixed effects. Further, the estimated coefficient of 0.045 is economically meaningful, as it indicates that when the proportion of outsiders in the senior management team increases by 1%, the average leverage of family firms will increase by 0.045%.

Taking Column (5) as an example, the leverage of family firms in which no family members remain in the senior executive team is higher than that of family firms that still have family members in the senior executive team by 0.017, when controlling for firm-specific factors and fixed effects. Further, the estimated coefficient of 0.017 is economically meaningful, as it indicates that the average leverage of family firms whose senior executive team has no family members is 1.7% higher than that of family firms with family members in the senior executive team when controlling for firm-specific characteristics and fixed effects.

The results are consistent with the notion that family firms with more outsiders in the senior management team will take on more debt than those with fewer outsiders.

Table 3. The presence of outsiders and leverage in family firms.

This table reports the results of Eq. (1), Eq. (2), and Eq. (3). The dependent variable is *Lev*. The key independent variable is *OutsiderFraction* in Columns (1) and (4), *NoFamilyExecutive* in Columns (2) and (5), and *NoFamilyManagement* in Columns (3) and (6). All of the control variables are lagged by one period. Appendix A presents the definitions of all of the variables. Robust t-statistics are reported in parentheses.

	(1)	(2)	(3)	(4)	(5)	(6)
<i>OutsiderFraction</i>	0.103*** (10.12)			0.045*** (4.16)		
<i>NoFamilyExecutive</i>		0.022*** (3.97)			0.017*** (3.15)	
<i>NoFamilyManagement</i>			0.027*** (7.98)			0.015*** (4.27)
<i>Size</i>				0.057*** (32.29)	0.058*** (33.11)	0.058*** (32.76)
<i>ROE</i>				-0.202*** (-12.74)	-0.201*** (-12.67)	-0.201*** (-12.66)
<i>SG</i>				0.001	0.001	0.001

				(0.53)	(0.54)	(0.50)
<i>Own</i>				-0.000**	-0.000**	-0.000**
				(-2.24)	(-2.26)	(-2.23)
<i>Board Size</i>				-0.016*	-0.015*	-0.015*
				(-1.75)	(-1.67)	(-1.69)
Constant	0.060***	0.144***	0.137***	-1.062***	-1.048***	-1.041***
	(6.89)	(88.03)	(70.61)	(-27.06)	(-26.82)	(-26.64)
Observations	8,481	8,481	8,481	8,481	8,481	8,481
R-squared	0.150	0.142	0.146	0.263	0.262	0.266
Industry FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Adj.R ²	0.142	0.133	0.138	0.256	0.255	0.258
F	102.4	15.79	63.70	235.5	232.8	200.4

(b) The presence of outsiders and bank loan in family firms

With the results in the prior section showing that family firms with more outsiders involved in their management have higher leverage, this section further testifies the relation between the presence of outsiders and the amount of bank loans obtained by family firms.

The main dependent variable is the Loan and the independent variables are *OutsiderFraction*, *NoFamilyExecutive*, and *NoFamilyManagement* respectively. For the robustness test, I use both the relative (the amount of bank loans scaled by total asset) and absolute (Logarithm of the bank loan amount) amount of bank loans to run the regressions respectively. In Eq. (4)-(6), all the control variables and fixed effects are the same as in Eq. (1).

$$Loan_{i,t} = \alpha + \beta OutsiderFraction_{i,t-1} + \Phi Controls_{i,t-1} + Fixed\ Effects + \varepsilon_{i,t} \quad (4)$$

$$Loan_{i,t} = \alpha + \beta NoFamilyExecutive_{i,t-1} + \Phi Controls_{i,t-1} + Fixed\ Effects + \varepsilon_{i,t} \quad (5)$$

$$Loan_{i,t} = \alpha + \beta NoFamilyManagement_{i,t-1} + \Phi Controls_{i,t-1} + Fixed\ Effects + \varepsilon_{i,t} \quad (6)$$

Table 4 reports the results in this section. I use the *OutsiderFraction* as the independent variable in Columns (1) and (4), *NoFamilyExecutive* in Columns (2) and (5), and *NoFamilyManagement* in Columns (3) and (6). I use the amount of bank loans scaled by total asset as the dependent variable in Columns (1) - (3), and the logarithm of the bank loans amount as the dependent variable in Columns (4) and (6). All of the control variables are lagged by one period.

For Columns (2) and (5), I find that the coefficients on the *NoFamilyExecutive* are significantly negative at the level of 1%. However, for Columns (1) and (4), when I use

OutsiderFraction as the independent variable to run the regressions, the coefficients on the *OutsiderFraction* are not significant. My results indicate that family firms significantly take on fewer bank loans when family members fully outsource their management to outsiders.

Taking Column (1) as an example, the level of bank loans of family firms with a higher proportion of outsiders in the senior management team is not significantly lower than that of family firms with a lower proportion of outsiders in the senior management team, when controlling for firm-specific factors and fixed effects.

Taking Column (2) as an example, the level of bank loans of family firms in which no family members stay in the senior executive team is significantly lower than that of family firms that still have family members in the senior executive team by 0.028 at the level of 1%, when controlling for firm-specific factors and fixed effects. Further, the estimated coefficient of 0.028 is economically meaningful, as it indicates that the average bank loan ratio of family firms whose senior executive team has no family members is 2.8% lower than that of family firms with family members in the senior executive team when controlling for firm-specific characteristics and fixed effects.

The results indicate that family firms with outsiders in the senior management team will take on fewer bank loans than those with fewer outsiders, only when outsiders fully control family firms' Senior executive team and no family members remain in the senior executive team.

Table 4. The presence of outsiders and bank loans in family firms.

This table reports the results of Eq. (4) - Eq. (6). The dependent variable is loan amount scaled by asset in Columns (1) to (3) and log value of Loan amount in Columns (4) to (6). The key independent variable is *OutsiderFraction* in Columns (1) and (4), *NoFamilyExecutive* in Columns (2) and (5), and *NoFamilyManagement* in Columns (3) and (6). All of the control variables are lagged by one period. Appendix A presents the definitions of all of the variables. Robust t-statistics are reported in parentheses.

	(1)	(2)	(3)	(4)	(5)	(6)
<i>OutsiderFraction</i>	-0.006 (-0.41)			0.826 (1.09)		
<i>NoFamilyExecutive</i>		-0.028*** (-3.84)			-0.860** (-2.40)	
<i>NoFamilyManagement</i>			-0.011** (-2.34)			0.041 (0.18)
<i>Size</i>	0.001 (0.47)	0.001 (0.41)	0.001 (0.58)	1.154*** (9.22)	1.121*** (9.70)	1.184*** (9.93)
<i>ROE</i>	-0.011 (-0.51)	-0.013 (-0.62)	-0.012 (-0.57)	-2.973** (-2.56)	-3.554*** (-3.33)	-3.215*** (-2.99)
<i>SG</i>	-0.002 (-0.74)	-0.002 (-0.76)	-0.002 (-0.73)	0.158 (1.34)	0.159 (1.44)	0.142 (1.29)
<i>Own</i>	-0.000 (-1.23)	-0.000 (-1.51)	-0.000 (-1.36)	-0.016* (-1.89)	-0.019** (-2.43)	-0.015* (-1.83)
<i>Board Size</i>	-0.010 (-0.80)	-0.010 (-0.84)	-0.010 (-0.81)	-0.907 (-1.44)	-1.628*** (-2.73)	-0.832 (-1.36)
Constant	0.095* (1.80)	0.098* (1.89)	0.089* (1.71)	-15.492*** (-5.59)	-12.333*** (-4.80)	-15.666*** (-5.91)

Observations	8,481	8,481	8,481	8,481	8,481	8,481
R-squared	0.079	0.081	0.080	0.133	0.079	0.098
Industry FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Adj.R ²	0.0685	0.0704	0.0692	0.0670	0.0887	0.0877
F	0.536	2.980	1.428	16.10	18.40	17.68

(c) The presence of outsiders and bonds in family firms

In this section, I investigate the relation between the presence of outsiders and the amount of bonds issued by family firms.

The main dependent variable is the *Bond* and the independent variables are *OutsiderFraction*, *NoFamilyExecutive*, and *NoFamilyManagement* respectively. For the robustness test, I use both the relative (the amount of bonds issued scaled by total asset) and absolute (Logarithm of the amount of bonds) amount of bonds to run the regressions respectively. In Eq. (7)-(9), all the control variables and fixed effects are the same as in Eq. (1).

$$Bond_{i,t} = \alpha + \beta OutsiderFraction_{i,t-1} + \Phi Controls_{i,t-1} + Fixed\ Effects + \varepsilon_{i,t} \quad (7)$$

$$Bond_{i,t} = \alpha + \beta NoFamilyExecutive_{i,t-1} + \Phi Controls_{i,t-1} + Fixed\ Effects + \varepsilon_{i,t} \quad (8)$$

$$Bond_{i,t} = \alpha + \beta NoFamilyManagement_{i,t-1} + \Phi Controls_{i,t-1} + Fixed\ Effects + \varepsilon_{i,t} \quad (9)$$

Table 5 reports the results in this section. I use the *OutsiderFraction* as the independent variable in Columns (1) and (4), *NoFamilyExecutive* in Columns (2) and (5), and *NoFamilyManagement* in Columns (3) and (6). I use the amount of bonds scaled by total asset as the dependent variable in Columns (1) - (3), and the logarithm of the amount of the bond as the dependent variable in Columns (4) - (6).

Across all six columns, I find that the coefficients on the presence of outsiders are significantly positive. My results indicate that family firms have a higher amount of bonds when they have more outsiders involved in their management.

Taking Column (1) as an example, the level of bonds issued by family firms with a higher proportion of outsiders in the senior management team is significantly higher

than that of family firms with a lower proportion of outsiders in the senior management team by 0.006 at the level of 5%, when controlling for firm-specific factors and fixed effects. Further, the estimated coefficient of 0.006 is economically meaningful, as it indicates that when the proportion of outsiders in the senior management team increases by 1%, the average leverage of family firms will increase by 0.006%.

Taking Column (2) as an example, the level of bonds issued by family firms in which no family members stay in the senior executive team is significantly higher than that of family firms that still have family members in the senior executive team by 0.003 at the level of 5%, when controlling for firm-specific factors and fixed effects. Further, the estimated coefficient of 0.003 is economically meaningful, as it indicates that the average bank loan ratio of family firms whose senior executive team has no family members is 0.3% higher than that of family firms with family members in the senior executive team when controlling for firm-specific characteristics and fixed effects.

The results are consistent with the notion that family firms with outsiders in the senior management team will issue more bonds than those with fewer outsiders.

Table 5. The presence of outsiders and bonds in family firms.

This table reports the results of Eq. (7) - Eq. (9). The dependent variable is bond amount scaled by asset in Columns (1) to (3) and log value of Bond amount in Columns (4) to (6). The key independent variable is *OutsiderFraction* in Columns (1) and (4), *NoFamilyExecutive* in Columns (2) and (5), and *NoFamilyManagement* in Columns (3) and (6). All of the control variables are lagged by one period. Appendix A presents the definitions of all of the variables. Robust t-statistics are reported in parentheses.

	(1)	(2)	(3)	(4)	(5)	(6)
<i>OutsiderFraction</i>	0.006** (2.44)			1.237** (2.47)		
<i>NoFamilyExecutive</i>		0.003** (2.13)			0.489* (1.86)	
<i>NoFamilyManagement</i>			0.001* (1.79)			0.366** (2.27)
<i>Size</i>	0.010*** (27.23)	0.012*** (25.04)	0.010*** (27.64)	2.946*** (35.92)	3.028*** (35.08)	2.962*** (36.36)
<i>ROE</i>	-0.008** (-2.28)	-0.004 (-0.94)	-0.008** (-2.29)	-1.669** (-2.27)	-1.064 (-1.07)	-1.675** (-2.28)
<i>SG</i>	-0.001*** (-3.57)	-0.002*** (-4.22)	-0.001*** (-3.57)	-0.341*** (-4.53)	-0.379*** (-4.65)	-0.342*** (-4.53)
<i>Own</i>	-0.000*** (-2.77)	-0.000*** (-2.97)	-0.000*** (-2.82)	-0.023*** (-4.22)	-0.020*** (-3.47)	-0.023*** (-4.25)
<i>Board Size</i>	-0.002 (-0.90)	0.001 (0.21)	-0.002 (-0.88)	0.134 (0.32)	0.314 (0.73)	0.139 (0.33)
Constant	-0.209*** (-25.19)	-0.236*** (-22.92)	-0.207*** (-25.01)	-61.605*** (-33.86)	-62.941*** (-32.81)	-61.048*** (-33.74)

Observations	8,481	8,481	8,481	8,481	8,481	8,481
R-squared	0.152	0.140	0.151	0.235	0.265	0.235
Industry FE	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Adj.R ²	0.142	0.130	0.141	0.226	0.209	0.226
F	135.1	112.7	134.7	237.0	217.6	237.0

(d) Summary

In this section, I provide empirical evidence to test the main hypothesis. First of all, my results indicate that family firms take on more debt and have higher leverage when they have more outsiders involved in their management. Besides, family firms with outsiders in the senior management team will take on fewer bank loans than those with fewer outsiders, only when outsiders fully control family firms' senior executive team and no family members remain in the senior executive team. At last, family firms have a higher amount of bonds when they have more outsiders involved in their management.

4.2.2 Endogeneity Tests: PSM-DID Setting

In this section, I use PSM-DID examinations to identify the causal relationship between the presence of outsiders and the firms' financing policy. Because of the omitted variables problem and reverse causality, there's potential endogeneity in the prior results. Thus, in this section, I provide further identification using the PSM-DID method.

Specifically, I use the outsiders' full control of family firms' senior executive team as an exogenous shock and examine these firms' change in leverage, amount of bank loans, and bonds relative to their counterparts.

I choose firms with their senior executive teams fully controlled by outsiders (no family members in the senior executive teams) as the treated group and use the PSM method to obtain a control group. The firms in the control group still have family members in their senior executive teams.

I follow Gao et al. (2022) and Gao et al. (2020) to match covariates to construct

the PSM sample. I use require the matched family firms to have similar fundamental characteristics across four dimensions: *Size*, *ROE*, *SG*, and *Own*. I use those four variables to estimate propensity scores using logit regressions. Besides, I require the matched control group to be in the same year and be in the same industry as the treated group during matching. I construct a 1-to-3 matched sample.

The DID regression is as follows:

$$Lev_{i,t} = \alpha + \beta_1 D_{i,t} + \beta_2 Post_{i,t} + \beta_3 D_{i,t} * Post_{i,t} + \Phi Controls_{i,t-1} + Fixed\ Effects + \varepsilon_{i,t} \quad (10)$$

In Eq. (10), D is a dummy variable that equals 1 if a firm is in the treated group and 0 otherwise. The examination window is from three years before to three years after a firm's senior executive team becomes fully controlled by outsiders, which means that there are no family members in the firm's senior executive team, and the family members exit from the senior management team. $Post$ equals 1 after a firm's senior executive team becomes fully controlled by outsiders and 0 otherwise. The coefficient of the interaction term $D*Post$ indicates the change in the leverage of firms in the treated group relative to firms in the control group.

$$Loan_{i,t} = \alpha + \beta_1 D_{i,t} + \beta_2 Post_{i,t} + \beta_3 D_{i,t} * Post_{i,t} + \Phi Controls_{i,t-1} + Fixed\ Effects + \varepsilon_{i,t} \quad (11)$$

$$Bond_{i,t} = \alpha + \beta_1 D_{i,t} + \beta_2 Post_{i,t} + \beta_3 D_{i,t} * Post_{i,t} + \Phi Controls_{i,t-1} + Fixed\ Effects + \varepsilon_{i,t} \quad (12)$$

In Eq. (11) and Eq. (12), I also use *Loan* and *Bond* respectively as dependent variables to re-run the regressions. The coefficient of the interaction term $D*Post$ indicates the change in the use of bank loans and bonds of firms in the treated group relative to firms in the control group.

Table 6 reports the results of the PSM-DID regressions of a 1-to-3 matched sample.

The dependent variable is *Lev* in Column (1), *Loan* in Column (2), and *Bond* in Column (3). The Appendix presents the definitions of all of the variables. Robust t-statistics are reported in parentheses. I use the amount of bank loans scaled by total assets as the dependent variable in Column (2) and the amount of bonds scaled by total assets as the dependent variable in Column (3).

The results of the DID regressions show that the family firms of which the senior executive team is fully controlled by outsiders have higher leverage, take on more bank loans, and use fewer bonds.

As for Column (1), the results indicate that family firms in which the senior executive team is fully controlled by outsiders have higher leverage than their counterparts by 0.031 at the level of 10%.

As for Column (2), the results indicate that family firms in which the senior executive team is fully controlled by outsiders take on fewer bank loans than their counterparts by 0.038 at the level of 5%.

As for Column (3), the results indicate that family firms in which the senior executive team is fully controlled by outsiders issue more bonds than their counterparts by 0.007 at the level of 10%.

Table 6. Endogeneity tests: PSM-DID setting.

This table reports the results of the DID regressions (Eq.(10), Eq.(11) and Eq.(12)).

Post equals 1 after a firm's senior executive team becomes fully controlled by outsiders and 0 otherwise. The coefficient of the interaction term $D*Post$ indicates the change in the leverage of firms in the treated group relative to firms in the control group. The dependent variable is *Lev* in Column (1), *Loan* in Column (2), and *Bond* in Column (3). Appendix presents the definitions of all of the variables. Robust t-statistics are reported in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels, respectively.

	(1)	(2)	(3)
<i>D*Post</i>	0.031* (1.90)	-0.038** (-2.12)	0.007* (1.88)
<i>D</i>	-0.025** (-2.24)	0.005 (0.38)	0.003 (0.98)
<i>Post</i>	-0.009 (-0.86)	0.003 (0.25)	-0.004 (-1.62)
<i>Size</i>	0.062*** (14.07)	-0.005 (-0.93)	0.009*** (8.49)
<i>ROE</i>	-0.229*** (-8.48)	-0.011 (-0.35)	-0.014** (-2.08)
<i>SG</i>	-0.000 (-0.59)	-0.000 (-0.08)	-0.000* (-1.71)
<i>Own</i>	-0.001*** (-3.09)	-0.000 (-0.64)	0.000 (1.08)
<i>Board Size</i>	-0.065*** (-3.33)	-0.060*** (-2.72)	0.007 (1.57)
Constant	-0.971*** (-10.18)	0.295*** (2.76)	-0.201*** (-8.69)
Observations	1,235	1,235	1,235
Industry FE	YES	YES	YES
Year FE	YES	YES	YES
Adj. R ²	0.351	0.126	0.174
F	31.14	2.016	12.14

4.2.3 Heterogeneity Analysis

In this section, I investigate factors that could moderate the relation between the presence of outsiders and financing policy in family firms: family firms' tunneling activities and expropriation risks.

Compare to the US and other developed markets, the institutional feature and legislation environment is relatively poor in China. Thus, the weak protections for minority shareholders intensify the agency problems in Chinese listed firms.

In China, there is often only one controlling blockholder in listed firms, especially in family firms (Li et al., 2014), and the conflict of interest between family shareholders and minority shareholders or creditors is severe. For example, the controlling family may maximize its own interests by controlling the restructuring and equity trading of the listed company, thereby damaging the interests of the listed company, especially minority shareholders. Further empirical results show that the separation of ultimate control rights and cash flow rights intensifies the probability and degree of family controlling shareholders taking out small shareholders (Chen et al., 2012; Wei et al., 2012).

As a result, Chinese listed firms are with high expropriation risks and are likely to engage in tunneling activities (Jiang et al., 2010; Peng et al., 2011), which leads to severe agency conflicts between family shareholders and creditors (Gao et al., 2020).

However, the presence of outsiders in family firms may alleviate the agency conflicts between family shareholders and creditors because it could improve the firms' governance structure by adding outside independent roles into the firms' operation and

management.

Thus, in this section, I investigate the moderating effect of tunneling activities on the relation between the presence of outsiders and family firms' financing decisions. I use two well-documented measures for tunneling activities, related party transactions (*RPT*) and other receivables (*OR*) following prior studies (Cheung et al., 2006; Jiang et al., 2010; Peng et al., 2011).

(a) Heterogeneity analysis: related party transactions

Related party transactions are typical tools for blockholders to expropriate firm wealth (Cheung et al., 2006; Peng et al., 2011). For example, in family firms, family shareholders could expropriate firm wealth by selling assets at a price that is lower than the market price to a related party.

To identify the effect of tunneling difference, I first add *RPT* and the interaction term, *OutsiderFraction***RPT*, to explore the marginal effect of *RPT* on family firms' bond amount. The coefficient of the interaction term *OutsiderFraction***RPT* indicates the marginal effect of related party transactions on the relation between the presence of outsiders and the bond amount of family firms.

Specifically, I examine the relation of outsiders, *RPT* and the *Bond* as follows:

$$Bond_{i,t} = \alpha + \beta OutsiderFraction_{i,t-1} + \gamma OutsiderFraction_{i,t-1} \cdot RPT_{i,t-1} + \delta RPT_{i,t-1} + \Phi Controls_{i,t-1} + Fixed\ Effects + \varepsilon_{i,t} \quad (13)$$

$$Bond_{i,t} = \alpha + \beta NoFamilyExecutive_{i,t-1} + \gamma NoFamilyExecutive_{i,t-1} \cdot RPT_{i,t-1} + \delta RPT_{i,t-1} + \Phi Controls_{i,t-1} + Fixed\ Effects + \varepsilon_{i,t} \quad (14)$$

The main dependent variable is the *Bond* and the independent variables are

interaction terms between *Outsider* (*NoFamilyExecutive*) and *RPT* respectively. I use the amount of bonds scaled by the total asset to run the regressions.

Table 7 reports the results in this section. I use the *OutsiderFraction*RPT* as the independent variable in Columns (1) and (2), and *NoFamilyExecutive*RPT* in Columns (3) and (4) for robustness checks. I do not include firm-specific factors in the regressions in Columns (1) and (3) and I add firm-specific factors in the regressions in Columns (2) and (4). All of the control variables are lagged by one period.

Across all four columns, I find that the coefficients on the interaction term of the presence of outsiders and related party transactions are significantly positive. My results indicate that the relation between the presence of outsiders and bonds amount becomes stronger when family firms have higher expropriation risk through related party transactions.

The results are consistent with the notion that the positive relation between the presence of outsiders and the issue of bonds is stronger for family firms with a high amount of related party transactions.

Table 7. Heterogeneity analysis: related party transactions.

This table reports the results of Eq. (13) and Eq. (14). The dependent variable is bond amount scaled by asset. The key independent variable is *OutsiderFraction*RPT* in Columns (1) and (2), and *NoFamilyExecutive*RPT* in Columns (3) and (4). All of the control variables are lagged by one period. Appendix A presents the definitions of all of the variables. Robust t-statistics are reported in parentheses.

	(1)	(2)	(3)	(4)
<i>OutsiderFraction*RPT</i>	0.022*** (4.38)	0.003*** (3.47)		
<i>NoFamilyExecutive*RPT</i>			0.007*** (5.20)	0.003*** (3.67)
<i>NoFamilyExecutive</i>			0.000 (0.10)	0.002 (1.41)
<i>OutsiderFraction</i>	-0.029*** (-3.06)	-0.000 (-0.03)		
<i>RPT</i>	-0.079* (-1.89)	0.003 (0.21)	0.041*** (2.76)	0.003 (0.23)
<i>Size</i>		0.011*** (22.12)		0.011*** (22.23)
<i>ROE</i>		-0.003 (-0.79)		-0.003 (-0.76)
<i>SG</i>		-0.002*** (-4.11)		-0.002*** (-4.11)
<i>Own</i>		-0.000*** (-2.85)		-0.000*** (-2.75)
<i>Board Size</i>		0.000 (0.04)		0.000 (0.06)
Constant	0.015* (1.89)	-0.228*** (-21.50)	-0.009*** (-5.22)	-0.229*** (-21.83)
Observations	8,481	8,481	8,481	8,481
R-squared	0.080	0.142	0.079	0.142
Industry FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adj.R ²	0.0708	0.132	0.0697	0.132
F	63.82	86.72	60.64	86.99

(b) Heterogeneity analysis: other receivables

Family shareholders could expropriate by borrowing company assets or cash. In Chinese cases, the accounting item “other receivables” is always used to capture such kinds of borrowings (Jiang et al., 2010).

Thus, I add OR and the interaction term, $OutsiderFraction*OR$, to explore the marginal effect of OR on family firms’ bond amount. The coefficient of the interaction term $OutsiderFraction*OR$ indicates the marginal effect of other receivables on the relation between the presence of outsiders and the bond amount of family firms.

Specifically, I examine the relation of outsiders, OR , and the $Bond$ as follows:

$$Bond_{i,t} = \alpha + \beta OutsiderFraction_{i,t-1} + \gamma OutsiderFraction_{i,t-1} \cdot OR_{i,t-1} + \delta OR_{i,t-1} + \Phi Controls_{i,t-1} + Fixed\ Effects + \varepsilon_{i,t} \quad (15)$$

$$Bond_{i,t} = \alpha + \beta NoFamilyExecutive_{i,t-1} + \gamma NoFamilyExecutive_{i,t-1} \cdot OR_{i,t-1} + \delta OR_{i,t-1} + \Phi Controls_{i,t-1} + Fixed\ Effects + \varepsilon_{i,t} \quad (16)$$

The main dependent variable is the $Bond$ and the independent variables are interaction terms between Outsiders ($NoFamilyExecutive$) and OR respectively. I use the amount of bonds scaled by total asset) to run the regressions.

Table 8 reports the results in this section. I use the $OutsiderFraction*OR$ as the independent variable in Columns (1) and (2), and $NoFamilyExecutive*OR$ in Columns (3) and (4) for robustness checks. I do not include firm-specific factors in the regressions in Columns (1) and (3) and I add firm-specific factors in the regressions in Columns (2) and (4). All of the control variables are lagged by one period.

Across all four columns, I find that the coefficients on the interaction term of the

presence of outsiders and other receivables are significantly positive. My results indicate that the relation between the presence of outsiders and bonds amount becomes stronger when family firms have higher expropriation risk through other receivables.

The results are consistent with the notion that the positive relation between the presence of outsiders and the issue of bonds is stronger for family firms with a higher amount of other receivables.

Table 8. Heterogeneity analysis: other receivables.

This table reports the results of Eq. (15) and Eq. (16). The dependent variable is bond amount scaled by asset. The key independent variable is *OutsiderFraction*OR* in Columns (1) and (2), and *NoFamilyExecutive*OR* in Columns (3) and (4). All of the control variables are lagged by one period. Appendix A presents the definitions of all of the variables. Robust t-statistics are reported in parentheses.

	(1)	(2)	(3)	(4)
<i>OutsiderFraction*OR</i>	0.024*** (2.60)	0.025** (2.33)		
<i>OutsiderControl*OR</i>			0.006*** (4.83)	0.004*** (2.76)
<i>OutsiderFraction</i>	-0.030** (-1.98)	-0.035** (-1.99)		
<i>NoFamilyExecutive</i>			-0.003 (-0.26)	-0.002 (-0.14)
<i>OR</i>	0.001 (0.67)	-0.002** (-2.18)	0.002*** (10.60)	-0.000 (-0.99)
<i>Size</i>		0.010*** (22.82)		0.010*** (22.74)
<i>ROE</i>		-0.007** (-2.21)		-0.007** (-2.15)
<i>SG</i>		-0.001*** (-3.39)		-0.001*** (-3.45)
<i>Own</i>		-0.000*** (-2.58)		-0.000*** (-2.58)
<i>Board Size</i>		-0.002 (-1.08)		-0.002 (-1.08)
Constant	-0.009 (-0.72)	-0.165*** (-9.61)	-0.035*** (-13.74)	-0.195*** (-24.13)
Observations	8,481	8,481	8,481	8,481
R-squared	0.093	0.156	0.092	0.155
Industry FE	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Adj.R ²	0.0837	0.146	0.0833	0.145
F	118.1	104.7	116.8	104.1

(c) Summary

In this section, I provide empirical evidence to test the hypothesis from the perspective of expropriation risks. Overall, my results indicate that the positive relation between the presence of outsiders and the issue of bonds becomes stronger when family firms have higher expropriation risks. I use related party transactions and other receivables to test my hypothesis respectively and the results still hold.

4.2.4 Robustness Test

To conduct a robustness test, I use a subsample only including family firms that have bonds in the open market to re-run the regressions. The results are reported in Table 9. The main dependent variable is the Bond scaled by the asset. The independent variable is *OutsiderFraction* in Column (1), *NoFamilyExecutive* in Column (2), and *NoFamilyManagement* in Column (3). The estimated coefficients on the presence of outsiders are all significant only for family firms in which the senior management team is fully controlled by the outsiders (*NoFamilyManagement*=1) and for family firms in which the senior executive team is fully controlled by the outsiders (*NoFamilyExecutive*=1). However, the results in Column (1) show that the proportion of outsiders does not significantly influence the bond ratio.

Table 9. Robustness test.

This table reports the results for sub-sample including firms which has bonds in the open market. The dependent variable is Bond amount scaled by asset. The independent variable is *OutsiderFraction* in Column (1), *NoFamilyExecutive* in Column (2), and *NoFamilyManagement* in Column (3). Appendix A presents the definitions of all of the variables. Robust t-statistics are reported in parentheses.

	(1)	(2)	(3)
<i>OutsiderFraction</i>	0.007 (1.22)		
<i>NoFamilyExecutive</i>		0.009*** (3.44)	
<i>NoFamilyManagement</i>			0.005*** (3.26)
<i>Size</i>	-0.018*** (-8.06)	-0.018*** (-8.23)	-0.018*** (-8.12)
<i>ROE</i>	0.014 (0.67)	0.015 (0.72)	0.014 (0.66)
<i>SG</i>	-0.009*** (-2.60)	-0.008** (-2.51)	-0.009*** (-2.65)
<i>Own</i>	-0.000 (-0.27)	-0.000 (-0.20)	-0.000 (-0.29)
<i>Board Size</i>	0.011 (1.02)	0.011 (1.08)	0.011 (1.08)
Constant	0.496*** (9.35)	0.494*** (9.43)	0.492*** (9.40)
Observations	905	905	905
R-squared	0.238	0.240	0.239
Industry FE	YES	YES	YES
Year FE	YES	YES	YES
Adj.R ²	0.180	0.182	0.181
F	12.55	12.89	12.80

CHAPTER 5 CONTRIBUTION, FUTURE RESEARCH, AND CONCLUSION

5.1 Research Contribution

My study contributes to the literature in two ways.

First, I contribute to the studies on influencing factors of family firms' financing decisions. Prior studies show that ownership structure could influence the financing decision (Ettore Croci, 2011; Keasey K et al., 2015) and financing constraints (Christian Andres, 2011) of family firms. My study shed light on how the presence of outsiders, which is usually ignored by prior literature, could influence family firms' financing policy. Prior studies show that outside CEO may want to offset the higher entrepreneurial risk by reducing financial risk to minimize bankruptcy risk, and thus the presence of an outside CEO is negatively associated with the leverage of family firms in Belgium (Andy Lardon et al., 2016). Besides, firms with a family CEO are long-term and survival oriented, which should align the interests of the lender and the borrower (Chua et al., 2011).

My study provides new on the relation between the presence of outsiders in family firms and firm leverage. I show that the presence of outsiders will lead to higher leverage in family firms. Further, the results indicate that family firms with more outsiders in the senior management team will have fewer bank loans but more bonds. Therefore, this study shows that the presence of outsiders in family firms in China will not only increase family firms' willingness for debt but also influence firms' debt financing level between bank loans and bonds.

Second, I contribute to the studies on the consequence of family-exit in family firms. Family-exit means that family members gradually exit from the management and operation of the firms and hire some outside professional experts to help them to manage the firms, such as employing an outside CEO. Studies show that family-exit leads to more risk-taking (Jensen and Meckling, 1976). Outside CEO may have superior skills (Perez-Gonzalez, 2006; Bennedsen et al., 2007; Cucculelli and Micucci, 2008) and may be more likely to take advantage of attractive growth opportunities (Chua et al., 2003; Amore et al., 2011). Li et al.(2004) find that a higher family-exit level leads to higher firm value and better firm performance. However, Jiang et al. (2017) find that family-exit leads to the separation of family reputation and firm image, which may exacerbate the conflict of interest between controlling shareholders and minority shareholders.

My study provides new evidence on the consequence of family-exit. I show that family-exit leads to higher leverage in family firms. In addition, my results show that the presence of outsiders leads to a higher amount of bonds issued and fewer bank loans taken. This study provides new evidence that the presence of outsiders in family firms alleviates the conflicts between family shareholders and creditors.

5.2 Future Research

In the future, by widening my sample worldwide, my study would have a clear understanding of the relation between the presence of outsiders and family firms' financing decisions. Currently, some scholars have investigated the presence of

outsiders in family firms in some specific countries. However, few studies have explored this question under the international background. I will make some contributions and provide some evidence that the country's differences will have some impact on the presence of outsiders and family firms' financing decisions.

Second, by testing the channels through which outsiders in family firms help to reduce agency problems, I will make some contributions and provide more detailed evidence showing how the presence of outsiders helps to reduce agency problems in family firms. Further, by testing this question in the different country samples, I will provide further evidence about how the presence of outsiders is influencing the firms' financing decisions and whether it is different across the world.

5.3 Research Conclusion

In this study, I explore how the presence of outsiders in the senior management team of family firms is related to their financing decision in China. Based on a sample of Chinese listed family firms from 2008 to 2017, my results show that family firms with more outsiders in their senior management team or senior executive team have higher leverage and take on more debt. I further analyze the family firms' financing tools and the results indicate that family firms with a higher proportion of outsiders use fewer bank loans but issue more bonds.

To deal with the issue of endogeneity, I use the outsiders' full control of the senior executive team of the family firms as an exogenous shock to conduct PSM-DID analysis, and the results still hold.

Besides, from the perspective of expropriation risks, my further results show that the positive relationship between the presence of outsiders and the amount of bonds are both more pronounced for family firms with a higher amount of related party transactions and other receivables.

My results reveal that the presence of outsiders in family firms helps to alleviate the agency conflicts between family shareholders and creditors, and thus alleviate the financing constraints of family firms. Specifically, the presence of outsiders in family firms helps family firms to issue more bonds, which is a relatively more difficult financing method and has superior to bank loans in the procedure, amount, maturity, cost, etc.

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APPENDIX A

Table A1: Variable Definitions.

This table provides construction details for our key variables. The firms' accounting, ownership, and governance structure are from the China Stock Market and Accounting Research (CSMAR) Database. All variables are winsorized at 1% level in each period in regressions with accounting variables.

Variable Name	Variable Definition
<i>Lev</i>	Interest-bearing Liabilities/Total Asset.
<i>Bond</i>	The amount of new bond issued/Total Asset.
<i>Loan</i>	The amount of new loan/Total Asset.
<i>OutsiderFraction</i>	Proportion of outsiders in senior management team (CEO, vice general manager, CFO, secretary of the board of directors, and other persons specified in the articles of Association) of family firms.
<i>NoFamilyManagement</i>	A dummy variable that is equal to one if there are no family members in senior management team of the family firm and zero otherwise.
<i>NoFamilyExecutive</i>	A dummy variable that is equal to one if there are no family members in senior executive team (CEO, CFO, and Chairman) of the family firm and zero otherwise.
<i>Size</i>	Logarithm of total asset.

<i>ROE</i>	Net Profit/Equity.
<i>SG</i>	Annual sales growth rate for the firm.
<i>Own</i>	Shareholdings of the largest shareholder/total shares outstanding.
<i>Board Size</i>	Logarithm of number of people in the board of director.
<i>OR</i>	Logarithm of net other receivables.
<i>RPT</i>	Logarithm of total related party transactions amount.
