Family control and IPO underpricing
——Evidence from Chinese family firms

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Abstract：Using family controlled IPO firms from 2008 to 2015 in China, we examine how family control over management and ownership affects IPO underpricing. We find that as strong family control makes the controlling families not willing to introduce other block shareholders and have greater incentive to preserve socioemotional wealth, they tend to use greater underpricing to retain their control. Meanwhile, strong family control is regarded by outside investors as negative signal on the ex ante uncertainty of IPO which leads to greater underpricing. We use various measurements for family control over management and ownership and obtain strong support for our conjecture that family control is positively associated with IPO underpricing. Further investigations on the two kinds of control show that family control over ownership takes the first order effect in determining IPO underpricing. Additional tests also illustrate that non-family-related directors, non-family block shareholders and development of formal institutions could weaken the association between family control and underpricing.

Keywords: family control, IPO underpricing, China

1. Introduction

Going public is an important milestone for most firms. Becoming public firms could bring in both direct benefits such as better access to investors and liquidating the shareholdings of original shareholders, and indirect benefits such as building better reputation and improving corporate governance. Meanwhile, some disadvantages also accompany the act of getting listed such as higher cost, more intense public monitor and dilution of control rights. One cost of the public offering is that shares of issuers are usually sold at a discount in the primary market compared with the selling pricing on the first trading day, which is referred as the initial public offering (IPO) underpricing. There are numbers of theories rationalizing why IPOs are underpriced with ample empirical evidence. However,

most prior literature uses sample of all common firms without considering the specific feature of firms' ownership, for example, whether the firms are owned by the state or families, whose control over the firms could have significant influence on the pricing decision during the process of IPO. This paper thus focuses on family firms and investigates the association between family control over management and ownership and IPO underpricing within Chinese institutional settings.

Theories explaining the IPO underpricing could be categorized into four major strands, including the asymmetric information, institutional reasons, ownership and control and behavior explanations (Ljungqvist, 2007). Considering the ownership and management features of family firms, we focus on the ownership and control theory, which is referred as promising field in the research of IPO underpricing (Ljungqvist, 2007). Existing research does not reach consistent conclusion on the effect of ownership and control on IPO underpricing. One stream of literature argues that managers utilize underpricing to generate excess demand for shares in order to avoid the monitor from outside block holders and protect their private benefit of control (Brennan and Franks, 1997; Zingales, 1995). The other stream of literature conjectures that if the insiders' stakes are so large that the agency cost overweights their private benefit, they will have incentive to induce outside block shareholders for effective monitor (Stoughton and Zechner, 1998). This line of literature is mainly build upon traditional wisdom on the agency problem between managers and shareholders with dispersed ownership. However, given the fact that concentrated ownership is prevalent around the world, little is known about how the ownership and control structure determines the IPO underpricing in firms with

concentrated ownership.

Family owned firms are typical enterprises with block shareholders and widely exist around the world. Family firms are usually featured with large degree of family control over both management and ownership. The combination of ownership and management reduces the agency cost caused by the interest conflict between managers and shareholders, which leads the ownership and control theory could not fully explain the IPO underpricing of family firms. Meanwhile, the agency problem between the block shareholders and minority shareholders raises in family firms as entrenched family owners would utilize their control to tunnel firms' resources for private benefit of the controlling families which hurts the benefit of minority shareholders. In this case, when taking the firms to go public, controlling families have strong incentive to retain their control in order to preserve the benefit. IPO underpricing thus has been employed as instrument to retain family control. Leitterstof and Rau (2014) argue that as families try to reduce socioemotional loss caused by diluting control to outside shareholders at the IPO, they would underprice the IPO shares to generate oversubscription. They compare the underpricing of family and non-family firms, and find that family firms tend to have greater IPO underpricing. Similarly, Yu and Zheng (2012) use family members serving in the board or as senior managers to measure family involvement and find that strong family involvement is associated with greater IPO underpricing.

Above studies either consider family firms as economic entities sharing common features (Leitterstof and Rau, 2014) without distinguishing the heterogeneity among different families (Chua et al., 2012) or only utilize family members in management team to

measure family involvement (Yu and Zheng , 2012) without considering the various method for family to control firms through control enhancing mechanisms (Villalonga and Amit, 2009). Therefore, several issues concerning the IPO underpricing of family firms remain unclear. How does families' control over both ownership and management affect IPO underpricing? Which factor could dominate in determining IPO underpricing? Do internal and external factors constraining families' control affect the association between family control and IPO underpricing?

Based on the ownership and control theory of IPO underpricing, we conjecture that family control is positively associated with IPO underpricing. Firstly, controlling families have strong incentive to avoid the emergence of non-family block shareholders who would actively monitor the controlling family to restrict their private benefit produced by strong family control (Maury and Pajuste, 2005), so they will underprice the shares to attractive more investors for subscription (Booth and Chua, 1996; Brennan and Frank, 1997; Mello and Parsons, 1998). Secondly, the social emotional wealth (SEW) of controlling families could be preserved with less intervene of non-family block shareholders, so families with strong control also have incentive to underprice IPO shares. Thirdly, intense family control could send negative signal to outsider that the controlling family would tunnel the firms in the future, which increases the ex ante uncertainty of the firm. Therefore, issuers have to underprice the IPO shares to attract outside investors to compensate for the potential risk (Ritter, 1984; Beatty and Ritter, 1986).

We examine the above conjectures and research questions using data of family controlled IPO firms in China. As the authorities require that the family members' shareholdings and

executive positions should be disclosed in detail in IPO prospectuses, we could construct comprehensive measurements for families' control over both ownership and management. To be specific, we measure families' control over management with whether the founders take CEO positions, the percentage of family members in the board, and whether there is family member of second generation in the board. We measure families' control over ownership with the control-enhancing mechanism identified by Villalonga and Amit (2009) including the wedge between control rights and cash flow rights, excess control rights over the board and whether the families utilize pyramid structure to control the listed firms.

With above detailed measurements of family control, we show that family control over both management and ownership is positively associated with IPO underpricing. Further investigations on the conjunct effect of control over management and ownership show that family control over ownership strongly dominates the control over management in determining IPO underpricing. Meanwhile, we also find that several internal and external factors could moderate the relationship between family control and IPO underpricing. We find that the non-family-related directors and non-family block shareholders reduce the effect of family control over management and non-family block shareholders reduce the effect of family control over ownership. We also show that the development of formal institutions reduces the influence of family control on IPO underpricing.

We use Chinese firms as China has provided excellent institutional settings to address our research questions. Firstly, China's financial market is featured with undeveloped legal system and weak property rights protection, which makes controlling families pursue private benefit at the cost of minority shareholders at lower risk (Allen et al., 2005). In this

scenario, families with strong control before the IPO process will have stronger incentive to retain such control, which leads to greater underpricing. Meanwhile, realizing the potential risk of controlling families' tunneling and lacking ex post protection instruments, outside investors thus would require more discount for the IPO shares. Secondly, Chinese entrepreneurs are heavily influenced by China's traditional culture, which let them have great desire to preserve the longevity of the family business and to pass down from one generation to next generation. In the succession process, they would try every effort to avoid the emergence of non-family block shareholders, who might take over the family business in the future. Lastly, the detail information about family members' shareholdings and executive positions in both IPO firms and parent firms are required to be disclosed in IPO prospectuses by Chinese authorities, so we can construct the necessary measurements with this data set.

This research makes several contributions to the existing literature. We complement the research of ownership and control explanation of IPO underpricing with evidence from one typical concentrated ownership, the family ownership by identifying the controlling families' control over management and ownership as one important determinate for IPO underpricing. Moreover, our empirical results illustrate which of the two factors have the first order effect for underpricing. Prior literature has identified various instruments employed by controlling families to enhance their control and investigated how these instruments affect firm value (Almeida and Wolfenzon, 2006; Claessens et al., 2000; Villalonga and Amit, 2009). We add to this strand of literature by showing that such family control also has pronounced impact on IPO underpricing. We also provide complementary

evidence for the literature on corporate governance. Existing research show that outside directors, outside block shareholders and formal institutions could constrain the controlling shareholders to obtain private benefit at the cost of minority shareholders. We show that such restriction effect also exists for family controlling shareholders and thus affects them to make IPO pricing decisions.

This paper is organized as follows. Section 2 describe the sample and variables used in empirical tests. Section 3 presents the empirical results. Section 4 concludes the paper.

2. Data and sample

2.1. The sample

Our sample contents all IPO firms which are ultimately controlled by a nature person or a family from 2008 to 2015. We first look through all IPO firms during the sample period, and keep firms who could be identified with ultimate owners and the owners are nature persons or families. We exclude firms without complete financial data and firms in financial industry. We finally get 766 family controlled IPO firms as our sample.

2.1. Variables

2.1.1. Dependent variable

Following prior research (Ritter and Welch, 2002; Ljungqvist, 2007), IPO underpricing is measured by first-day return, which is calculated as the difference between closing market price on the first trading day and offering price, scaled by the offering price (*Underpricing*).

2.1.2. Independent variable

We hand collect information on family members' shareholdings and executive positions in IPO firms and related firms from IPO prospectuses and construct two sets of variables

measuring families' control over management and ownership.

The first set of variables relates to family management. The first variable measures families' control over key management positions and is an indicator on whether the founders take CEO positions (*CEO_founder*), which equals to 1 if the founder is CEO and to 0 otherwise. The second variable measures the families' control over the board and calculated as percentage of family members to total board members (*Board_family*). As involvement of family members from second generation further reflect the families' desire to enhance control and preserve business longevity (Yu and Zheng, 2012), we also construct an indicator on whether there is second generation in the board (*Secondgen*), which equals to 1 if there is at least one second generation family members in the board and to 0 otherwise.

The second set of variables relates to families' control cover ownership. The first variable is the wedge between control rights and cash flow rights (*Wedge*) calculated following prior research (Claessens et al., 2000). Control rights is the least shareholding in one controlling chain and if a family control the firms through several controlling chains, the control rights on each chain are added up for the family. Cash flow rights is the product of shareholdings in one controlling chain and is added up for one family if numbers of controlling chains are used. The second variable is the excess control over board (*Excesscontrol*) constructed following Villalonga and Amit (2009). The variable is calculated as difference between families' control rights and percentage of family members to board members. As many families utilize pyramid ownership structure to enhance their control, we also construct an indicator for pyramid structure (*Pyramid*),

which equals to 1 if the families use pyramid structure to control the listed firms and to 0 if the families directly hold shares of listed firms.

2.1.3. Moderators

We also include numbers of variables which might moderate the association between family control and IPO underpricing. The first variable is the percentage of non-family-related directors to total directors (*Nonrelated_director*). A director is defined as non-family-related if he/she is neither family member nor takes executive positions in family controlled firms. The second variable is shareholdings of first non-family shareholders (*Nonfamily_shares*). The third variable is the Marketization Index (*Market*) from Fan and Wang (2016).

2.1.4. Control variables

We include numbers of control variables in empirical specification. We control firm size (*Size*) with natural logarithm of total assets, control firm performance with return on assets (*ROA*), control firm leverage (*Leverage*) with the ratio of total debt to total assets. All these variables on firms' characteristics are measured with data at one year before the IPO. We also include control variables for the offering and trading. We control the offering size (*Proceeds*) with the natural logarithm of total proceeds from the offering, control the market volatility (*Market_ret*) with 30 days cumulated market return before the IPO, control the underwriters' reputation (*Underwriter*) with indicator on whether the underwriters' market share ranks top 10 in the market, and control market liquidity (*Turnover*) with turnover of the first trading day.

3. Empirical results

3.1. Descriptive statistics

Table 1 presents the descriptive statistics for all variables. The IPO underpricing of Chinese family firms is pretty large with an average underpricing of 38.5%. The number is much larger than family firms in Hong Kong (7.74% in Yu and Zheng, 2012) and in Germany (6% in Leitterstorf and Rau, 2014). Results for family control show that 60.5% firms have founders as CEOs, on average 22.8% board members are family members, and 16.1% firms have second generation family members in the board. The results also show that families do utilize control enhancing mechanisms with an average wedge of 5.9% and 53.8% firms use pyramid structure. However, excess board control is less common with a mean of -29.3%. The family control also faces strong constraints from non-family-related directors, taking 59.7% of board positions and from largest non-family shareholders, who hold 10.47% shares.

[Insert Table 1 here]

3.2. Family control and underpricing

We first examine the basic relationship between family control and IPO underpricing by regressing underpricing on various family control measurements. The results on families' control over management are presented in Table 2. All three family control variables have positive and significant coefficients, suggesting that family control over management leads to greater IPO underpricing. These results are consistent with the positive association between family involvement and underpricing shown by Yu and Zheng (2012) and Leitterstorf and Rau (2014). Our results are different from prior literature that we specify the instruments used by the family to retain the control by making founder as CEO,

arranging more family members in the board, which reflect the families' desire to exert control over the firms. Meanwhile, having family members from second generation might further reflect the families' hope to pass down the business. All these control modes enhance the controlling families' incentives to exclude the non-family block shareholders and thus lead to greater underpricing.

[Insert Table 2 here]

The results on families' control over ownership are reported in Table 3. Results show that when families utilize various control-enhance mechanism on ownership, the firms will have greater IPO underpricing, suggested by positive and significant coefficients of all major independent variables. Similar with the families' control over management, when families have stronger control over the ownership, they have greater incentives to retain such control for possible private benefit. Seeing the strong control on ownership, outside investors would require more compensate on IPO pricing for undertaking more uncertainty. Therefore, controlling family with stronger control over ownership would underprice the IPO share more.

[Insert Table 3 here]

We have already identified family control over management and ownership as determinates for IPO underpricing of Chinese family firms. A nature question following the above tests is that which of the two factors take the first order effect in determining underpricing. We thus examine this question by grouping the sample with family control over ownership. We divide the sample into two groups according to the sample mean of firms' wedge and excess control. If family control over management dominates the control

over ownership, we could see that in both groups the measurements for control over management keep significant. However, if the coefficients of control over management change with grouping, we could say the grouping variables have the dominate effect. Results on above tests are presented in Table 4. The results show that throughout all regressions, coefficients of measurements for family control over management are only significant in the groups with stronger control over ownership and lose significance in groups with weaker control over ownership. The results confirm that family control over ownership have the first order effect in determining IPO underpricing. The results are also consistent with the conclusion that the agency problem between family controlling shareholders and minority shareholders has more pronounced effect in shaping firms' decision makings than the agency problem between managers and shareholders (Bennedsen et al., 2015).

[Insert Table 4 here]

3.3. The moderating effect of non-family-related directors

Outside directors have been proved to be able to effectively monitor managers (Rosenstein and Wyatt, 1990; Byrd and Hickman, 1992). When controlling families exert control through appointing more family members in executive positions, directors with no relationship with the controlling families would play monitoring role for the benefit of minority shareholders. To exclude the influence of controlling families, we defined non-family-related directors as directors who are neither family members nor taking positions in any family controlled firms. We examine the moderating effect of such directors by introducing the interaction term of non-family-related directors and family

control over management.

Results in Table 5 show that non-family-related directors weaken the association between family control over management and underpricing, illustrated by the negative and significant coefficient in all regressions. The results further confirm the monitoring role of outside directors.

[Insert Table 5 here]

3.4. The moderating effect of non-family block shareholders

Outside block shareholders also could play monitoring role for controlling shareholders (Claessens et al., 2002; Lins, 2003; Edwards and Weichenrieder, 1999). Although controlling families are not willing to dilute their control rights, they sometimes have to introduce non-family block shareholders in order to raise sufficient capital. In this case, the block shareholders will constrain the controlling families' tunneling behavior in order to preserve their own wealth. Meanwhile, the introduction of non-family block shareholders could also be regarded as positive signal by the outside investors, so they would require relatively less compensate for undertaking future risk. As the non-family block shareholders will have impact on both management and ownership, we examine the moderating effect of non-family block by introducing the interaction term of non-family block shareholders and family control over management and ownership.

Results in Table 6 show that non-family block shareholders weaken the association between family control over management and ownership and underpricing, illustrated by the negative and significant coefficient in all regressions. The results further confirm that outside block shareholders can play active monitoring role in constraining the controlling

shareholders.

[Insert Table 6 here]

3.5. The moderating effect of formal institution

The development of formal institution such as the legal system and property rights protection could also constrain controlling shareholders' pursuing private benefit (Fan et al., 2011). We examine such moderating effect by introducing the interaction term of marketization index and family control over management and ownership. Results in Table 7 show that development of formal institution also weakens the relationship between family control and IPO underpricing.

[Insert Table 7 here]

4. Conclusion

Using family controlled IPO firms from 2008 to 2015 in China, we examine how family control over management and ownership affects IPO underpricing. We find that as strong family control makes the controlling families not willing to introduce other block shareholders and have greater incentive to preserve SEW, they tend to use greater underpricing to retain their control. We use various measurements for family control over management and ownership and obtain strong support for our conjectures. Further investigations on the two kind of control show that family control over ownership take the first order effect in determining IPO underpricing. Additional tests also illustrate that non-family-related directors, non-family block shareholders and development of formal institutions could weaken the association between family control and underpricing.

References

Almeida, H. and Wolfenzon, D. 2006. A Theory of Pyramidal Ownership and Family Business Group. Journal of Finance 61, 2637–80.

Allen, A., Qian, J., & Qian, M. (2005). Law, finance, and economic growth in China. Journal of Financial Economics, 77, 57–116.

Beatty, R.P., Ritter, J.R., 1986. Investment banking, reputation, and the underpricing of initial public offerings. Journal of Financial Economics 15, 213–232.

Bennedsen, M., Fan, J. P.H. Jian, M., Yeh, Y. The family business map: Framework, selective survey, and evidence from Chinese family firm succession. Journal of Corporate Finance 33, 212-226.

Booth J. R., L. Chua, 1996. Ownership dispersion, costly information, and IPO underpricing. Journal of Financial Economics 41, 291–310.

Brennan, M. J., Franks, J., 1997. Underpricing, ownership and control in initial public offerings of equity securities in the U.K. Journal of Financial Economics 45, 391–413.

Byrd, J. W., Hickman, K. A. Do outside directors monitor managers?: Evidence from tender offer bids. Journal of Financial Economics 32, 195-221.

Claessens S., Fan, J. P. H., Djankov, S.,Lang, L. 2000. The Separation of Ownership and Control in East Asian Corporations. Journal of Financial Economics 58, 81–112.

Chua J. H., J. Chrisman, L. P. Steier and S. B. Rau, 2012. Sources of heterogeneity in family firms: an introduction. Entrepreneurship Theory and Practice 36, 1103-1113.

Fan, G., Wang, X., Yu, J., 2016. Marketization index of China's provinces: NERI report 2016.

Fan, J. P. H., Wei, K. C. J., Xu, X. Corporate finance and governance in emerging markets: A selective review and an agenda for future research. Journal of Corporate Finance 17, 207-214.

Leitterstof M. P., and S. B. Rau, 2014. Socioemotional wealth and IPO underpricing of family firms. Strategic Management Journal 35, 751-760.

Ljungqvist, A., 2007. IPO underpricing. in Handbook of Coroporate Finance, Volume1, Edited by B. Espen Eckbo. Elsevier B.V.

Maury B. and A. Pajuste, 2005. Multiple large shareholders and firm value. Journal of Banking and Finance 29, 1813-1834.

Mello A. S. and J. E. Parsons, 1998. Going public and the ownership structure of the firm. Journal of Financial Economics 49, 79-109.

Ritter, J.R., 1984. The hot issue market of 1980. Journal of Business 57, 215–240.

Rosenstein, S., Wyatt, J. G. Outside directors, board independence, and shareholder wealth. Journal of Financial Economics 26, 175-191.

Stoughton, N.M., Zechner, J., 1998. IPO mechanisms, monitoring and ownership structure. Journal of Financial Economics 49, 45–78.

Villalonga,B., Amit, R. How Are U.S. Family Firms Controlled?. Review of Financial Studies 22,

3047-3091.

Yu X. and Y. Zheng, 2012. IPO Underpricing to Retain Family Control under Concentrated Ownership:
Evidence from Hong Kong. Journal of Business Finance & Accounting 39, 700-729.

Zingales, L., 1995. Insider ownership and the decision to go public. Review of Economic Studies 62,
425–448.

Table 1 Descriptive statistics

	N.	Mean	S.D.	Min	Max
Underpricing	766	0.385	0.448	-0.144	2.544
CEO_founder	762	0.605	0.520	0.000	3.000
Board_family	766	0.228	0.130	0.000	0.500
Secondgen	766	0.161	0.367	0.000	1.000
Wedge	766	0.059	0.110	-0.152	0.344
Excesscontrol	766	-0.293	0.167	-0.673	0.006
Pyramid	766	0.538	0.499	0.000	1.000
Nonrelated_director	765	0.597	0.158	0.111	0.909
Nonfamily_shares	766	10.465	9.762	0.000	58.000
Market	766	7.995	1.640	0.000	11.800
Size	766	20.958	0.681	19.657	23.108
ROA	766	0.067	0.026	0.019	0.155
Leverage	766	0.220	0.147	0.019	0.643
Proceeds	766	20.224	0.653	18.839	21.822
Market_ret	766	-0.004	0.110	-0.305	0.249
Underwriter	766	0.487	0.500	0.000	1.000
Turnover	766	0.625	0.285	0.001	0.941

Table2 Family control over management and underpricing

	(1)	(2)	(3)
CEO_founder	0.105***		
	(4.90)		
Board_family		0.754***	
		(5.58)	
Secondgen			0.343***
			(5.64)
Size	0.287***	0.257***	0.254***
	(4.07)	(3.75)	(3.90)
ROA	1.097	0.913	0.842
	(1.62)	(1.41)	(1.36)
Leverage	-0.135	-0.123	-0.152
	(-0.66)	(-0.62)	(-0.81)
Proceeds	-0.483***	-0.442***	-0.434***
	(-7.08)	(-6.78)	(-7.10)
Market_ret	0.985***	1.010***	0.970***
	(7.38)	(7.85)	(7.91)
Underwriter	-0.056**	-0.057**	-0.044*
	(-2.18)	(-2.28)	(-1.79)
Turnover	0.673***	0.651***	0.640***
	(13.62)	(14.08)	(14.53)
Constants	3.639***	3.354***	3.381***
	(8.46)	(8.49)	(8.68)
adj. R^2	0.35	0.39	0.42
F	37.45	43.17	49.74
N	762	766	766

t statistics in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3 Family control over ownership and underpricing

	(1) underpricing	(2) underpricing	(3) underpricing
Wedge	1.160***		
	(6.21)		
Excesscontrol		0.549***	
		(5.75)	
Pyramid			0.106***
			(4.47)
Size	0.222***	0.288***	0.257***
	(3.36)	(4.14)	(3.64)
ROA	0.543	1.182*	0.898
	(0.87)	(1.80)	(1.35)
Leverage	-0.140	-0.145	-0.133
	(-0.75)	(-0.73)	(-0.66)
Proceeds	-0.413***	-0.457***	-0.467***
	(-6.72)	(-6.88)	(-6.91)
Market_ret	0.980***	0.989***	1.010***
	(8.09)	(7.64)	(7.64)
Underwriter	-0.046*	-0.054**	-0.054**
	(-1.87)	(-2.13)	(-2.08)
Turnover	0.626***	0.643***	0.656***
	(14.30)	(13.80)	(13.61)
Constants	3.637***	3.336***	3.972***
	(8.94)	(8.15)	(8.75)
adj. R^2	0.42	0.38	0.35
F	46.89	41.03	39.37
N	766	766	766

t statistics in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4 The conjunct effect of family control over management and ownership

Panel A	(1)	(2)	(3)	(4)	(5)	(6)
Wedge	High	Low	High	Low	High	Low
CEO_founder	0.196***	-0.062*				
	(5.90)	(-1.65)				
Board_family			1.344***	-0.261		
			(6.13)	(-1.51)		
Secondgen					0.513***	-0.006
					(5.10)	(-0.08)
Size	0.230	0.244***	0.203	0.269***	0.233	0.261***
	(1.11)	(3.63)	(1.06)	(4.05)	(1.04)	(4.00)
ROA	1.818	1.017	0.728	0.997	0.740	1.001
	(1.47)	(1.21)	(0.69)	(1.19)	(0.67)	(1.18)
Leverage	-0.086	-0.028	-0.159	-0.076	-0.228	-0.051
	(-0.18)	(-0.12)	(-0.36)	(-0.31)	(-0.46)	(-0.21)
Proceeds	-0.399*	-0.461***	-0.343*	-0.482***	-0.393*	-0.476***
	(-1.93)	(-7.46)	(-1.84)	(-7.73)	(-1.78)	(-7.77)
Market_ret	0.810***	1.067***	0.704***	1.057***	0.737***	1.069***
	(3.92)	(6.02)	(3.64)	(6.00)	(4.00)	(6.03)
Underwriter	-0.090**	-0.013	-0.068*	-0.014	-0.062*	-0.018
	(-2.25)	(-0.37)	(-1.80)	(-0.41)	(-1.74)	(-0.52)
Turnover	0.596***	0.661***	0.530***	0.671***	0.627***	0.675***
	(8.15)	(10.92)	(8.30)	(11.01)	(8.19)	(10.80)
Constants	3.087***	4.157***	2.449***	4.090***	3.008***	4.081***
	(4.22)	(7.00)	(3.70)	(7.07)	(4.57)	(7.08)
adj. R^2	0.38	0.34	0.45	0.34	0.48	0.34
F	24.48	26.95	29.89	26.44	32.60	26.02
N	331	431	333	433	333	433

Panel B	(1)	(2)	(3)	(4)	(5)	(6)
Excess control	High	Low	High	Low	High	Low
CEO_founder	0.190***	-0.077*				
	(6.52)	(-1.91)				
Board_family			1.208***	-0.360*		
			(6.25)	(-1.80)		
Secondgen					0.436***	0.009
					(4.81)	(0.09)
Size	0.234	0.240***	0.209	0.276***	0.275*	0.268***
	(1.62)	(3.04)	(1.57)	(3.65)	(1.86)	(3.56)
ROA	1.337	1.093	0.814	1.123	0.674	1.133
	(1.47)	(1.10)	(1.00)	(1.13)	(0.83)	(1.12)
Leverage	-0.053	-0.034	-0.056	-0.097	-0.221	-0.077
	(-0.16)	(-0.12)	(-0.18)	(-0.35)	(-0.67)	(-0.27)
Proceeds	-0.376***	-0.479***	-0.340***	-0.512***	-0.427***	-0.507***
	(-2.63)	(-6.74)	(-2.66)	(-7.37)	(-2.99)	(-7.33)
Market_ret	0.847***	1.036***	0.788***	1.021***	0.867***	1.044***
	(4.45)	(5.54)	(4.38)	(5.50)	(5.09)	(5.59)
Underwriter	-0.089**	-0.005	-0.079**	-0.007	-0.074**	-0.011
	(-2.52)	(-0.12)	(-2.37)	(-0.18)	(-2.24)	(-0.29)
Turnover	0.574***	0.682***	0.527***	0.703***	0.584***	0.700***
	(7.14)	(10.83)	(7.59)	(10.89)	(7.29)	(10.96)
Constants	2.575***	4.623***	2.270***	4.542***	2.875***	4.555***
	(4.05)	(7.06)	(3.91)	(7.11)	(4.92)	(7.08)
adj. R^2	0.36	0.36	0.43	0.36	0.44	0.36
F	22.95	24.66	24.34	24.76	25.92	24.14
N	380	382	382	384	382	384

Table 5 The moderating effect of non-family-related directors

	(1)	(2)	(3)
CEO_founder	0.303***		
	(7.31)		
CEO_founder *Nonrelated_director	-0.615***		
	(-9.12)		
Board_family		1.329***	
		(8.21)	
Board_family* Nonrelated_director		-2.583***	
		(-10.20)	
Secondgen			0.446***
			(6.70)
Secondgen* Nonrelated_director			-0.505***
			(-6.94)
Nonrelated_director	0.364***	0.424***	0.080
	(4.12)	(5.00)	(1.05)
Size	0.143**	0.152**	0.215***
	(2.09)	(2.39)	(3.31)
ROA	0.784	0.885	0.661
	(1.31)	(1.52)	(1.11)
Leverage	0.027	-0.036	-0.104
	(0.14)	(-0.20)	(-0.57)
Proceeds	-0.283***	-0.260***	-0.371***
	(-4.25)	(-4.22)	(-6.07)
Market_ret	0.538***	0.512***	0.834***
	(4.05)	(4.21)	(7.00)
Underwriter	-0.036	-0.040*	-0.044*
	(-1.53)	(-1.81)	(-1.81)
Turnover	0.368***	0.331***	0.526***
	(7.67)	(7.44)	(11.92)
Constants	2.685***	1.996***	2.975***
	(6.84)	(5.96)	(7.96)
adj. R^2	0.47	0.53	0.46
F	36.33	39.01	40.88
N	760	765	765

t statistics in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 6 The moderating effect of non-family block shareholders

Panel A	(1)	(2)	(3)
CEO_founder	0.158***		
	(6.06)		
CEO_founder* Nonfamily_shares	-0.010***		
	(-5.98)		
Board_family		0.944***	
		(6.62)	
Board_family* Nonfamily_shares		-0.054***	
		(-6.23)	
Secondgen			0.377***
			(6.01)
Secondgen* Nonfamily_shares			-0.010***
			(-3.29)
Nonfamily_shares	0.005***	0.008***	-0.000
	(2.90)	(4.44)	(-0.00)
Size	0.212***	0.203***	0.237***
	(2.85)	(2.89)	(3.60)
ROA	1.010	0.666	0.675
	(1.55)	(1.09)	(1.10)
Leverage	-0.064	-0.100	-0.138
	(-0.31)	(-0.51)	(-0.74)
Proceeds	-0.384***	-0.353***	-0.409***
	(-5.25)	(-5.18)	(-6.61)
Market_ret	0.772***	0.706***	0.922***
	(5.70)	(5.52)	(7.60)
Underwriter	-0.051**	-0.048**	-0.049**
	(-2.03)	(-2.03)	(-2.04)
Turnover	0.520***	0.462***	0.597***
	(10.17)	(9.93)	(13.58)
Constants	3.277***	2.800***	3.280***
	(7.95)	(7.60)	(8.62)
adj. R^2	0.39	0.44	0.43
F	29.96	33.75	40.07
N	761	766	766

t statistics in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Panel B	(1)	(2)	(3)
Wedge	1.388***		
	(6.71)		
Wedge* Nonfamily_shares	-0.058***		
	(-4.42)		
Excesscontrol		0.745***	
		(8.07)	
Excesscontrol* Nonfamily_shares		-0.061***	
		(-8.14)	
Pyramid			0.178***
			(6.53)
Pyramid * Nonfamily_shares			-0.011***
			(-7.59)
Nonfamily_shares	0.000	-0.014***	0.006***
	(0.27)	(-5.60)	(3.59)
Size	0.213***	0.152***	0.205***
	(3.30)	(3.07)	(2.85)
ROA	0.325	1.077**	0.609
	(0.54)	(2.06)	(0.98)
Leverage	-0.139	-0.024	-0.127
	(-0.77)	(-0.16)	(-0.64)
Proceeds	-0.380***	-0.284***	-0.380***
	(-6.29)	(-6.11)	(-5.40)
Market_ret	0.831***	0.739***	0.691***
	(6.60)	(6.26)	(5.11)
Underwriter	-0.043*	-0.052**	-0.037
	(-1.81)	(-2.43)	(-1.49)
Turnover	0.514***	0.379***	0.478***
	(11.19)	(9.63)	(9.87)
Constants	3.276***	2.843***	3.417***
	(8.42)	(8.47)	(8.07)
adj. R^2	0.44	0.54	0.40
F	39.30	45.26	34.03
N	766	766	766

t statistics in parentheses
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 7 The moderating effect of formal institution

Panel A	(1)	(2)	(3)
CEO_founder	0.318***		
	(7.41)		
CEO_founder* Market	-0.048***		
	(-8.78)		
Board_family		1.378***	
		(8.28)	
Board_family* Market		-0.195***	
		(-10.21)	
Secondgen			0.445***
			(6.70)
Secondgen*Market			-0.036***
			(-7.03)
Market	0.035***	0.039***	0.010
	(3.81)	(4.33)	(1.17)
Size	0.163**	0.158**	0.212***
	(2.42)	(2.44)	(3.26)
ROA	0.760	0.550	0.626
	(1.29)	(1.00)	(1.06)
Leverage	-0.046	-0.104	-0.112
	(-0.25)	(-0.60)	(-0.62)
Proceeds	-0.299***	-0.267***	-0.366***
	(-4.62)	(-4.27)	(-5.97)
Market_ret	0.579***	0.501***	0.816***
	(4.37)	(4.04)	(6.75)
Underwriter	-0.047**	-0.052**	-0.046*
	(-2.02)	(-2.39)	(-1.95)
Turnover	0.373***	0.296***	0.533***
	(8.05)	(6.45)	(12.13)
Constants	2.555***	2.038***	2.906***
	(6.21)	(5.77)	(7.57)
adj. R^2	0.48	0.53	0.46
F	36.33	44.77	40.88
N	761	766	766

t statistics in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

	(1)	(2)	(3)
Wedge	1.739***		
	(7.79)		
Wedge* Market	-0.199***		
	(-8.92)		
Excesscontrol		1.109***	
		(10.19)	
Excesscontrol*Market		-0.168***	
		(-12.58)	
Pyramid			0.398***
			(9.62)
Pyramid *Market			-0.058***
			(-11.32)
Market	0.017**	-0.031***	0.031***
	(2.10)	(-3.84)	(3.61)
Size	0.172***	0.108*	0.165**
	(2.84)	(1.84)	(2.51)
ROA	0.312	0.545	0.455
	(0.55)	(1.02)	(0.80)
Leverage	-0.097	-0.004	-0.090
	(-0.56)	(-0.02)	(-0.49)
Proceeds	-0.295***	-0.212***	-0.284***
	(-5.17)	(-3.79)	(-4.48)
Market_ret	0.641***	0.509***	0.415***
	(5.22)	(4.50)	(3.14)
Underwriter	-0.044*	-0.041**	-0.021
	(-1.96)	(-2.00)	(-0.95)
Turnover	0.374***	0.276***	0.301***
	(8.74)	(6.21)	(6.99)
Constants	2.390***	2.385***	2.285***
	(6.69)	(7.02)	(6.06)
adj. R^2	0.50	0.59	0.51
F	42.09	50.67	40.16
N	766	766	766

t statistics in parentheses

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$