

The Impact of Family Ownership on Firm Value and Earnings Quality: Evidence from Korea

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Abstract: This study investigates how family ownership affects earnings quality and firm value of firms listed on the Korean Stock Exchange (KSE) in the post crisis period 2000-2008 using panel data set. Existing studies show that family ownership may either reduce or aggravate agency problems, suggesting that family ownership overlaps between type I and II agency problems. These unique characteristics of family ownership may affect firm value and quality of earnings. Korean firms exhibit some of the highest levels of family ownership, specifically affiliated ownership in the world. I classify family ownership into three categories: family ownership, pure family ownership and affiliated ownership. I find all three family ownership measures are positively associated with firm value and earnings quality. This result supports that family ownership mitigates agency problems, thereby improving firm value and earnings quality. However, family ownership of chaebol groups (business group) in Korea negatively affects firm value and earnings quality. Controlling family shareholders of chaebol groups have a dominant influence on firms they invest in using affiliated ownership. Significant affiliated ownership of chaebol groups, results in low firm value and earnings quality.

Key words: Family ownership, agency problems, firm value, earnings quality, panel data

INTRODUCTION

Shleifer and Vishny (1986) and La Porta *et al.* (1999) find that most public firms have controlling shareholders who are generally families, the founders and their heirs and family ownership is common around the world even in the countries with well-developed separation of ownership-management (e.g., US and UK). Publicly, traded firms in more than half of East Asian corporations are family controlled (La Porta *et al.*, 1999) and 30% of the S&P 500 in the US is a family firm (Anderson and Reeb 2003).

The effect of family ownership on firm value and earnings quality is controversial and is explained using two conflicting agency problems (Ali *et al.*, 2007): type I agency problem, the classic owner-manager conflict and type II agency problem, conflicts between controlling shareholders and non-controlling shareholders.

In the view of type I agency problems, family owner have a strong monitoring incentive to keep their wealth as long-term investors. Families can reduce agency problems between managers and owners by placing one of their members in the position of manager (Anderson *et al.*, 2003), suggesting that families can better oversee managers and control managers' opportunistic behaviors than other shareholders.

Since, families are long-term investors and want to pass the firm on to descendants, family ownership

is stable and more able to maintain efficient investment strategies to increase firm value (James, 1999).

However in the view of type II agency problem as family shareholdings increase, family managers become less constrained by disciplinary forces and more entrenched and thus higher family ownership can provide lower firm value and quality of earnings. Morck *et al.* (1988) argue that high level of insider shareholding could induce management entrenchment, thereby causing a moral hazard and informative asymmetry between the insiders (controlling family) and outside shareholders. In most family firms, family members serve as the firm's CEO or key member of management to maintain family control and transmit positions to their descendants so that family shareholdings protect family managers from external influence (Schulze *et al.*, 2001). In addition, controlling families are generally not willing to lose their control of the firm (Gomez-Mejia *et al.*, 2001). Specifically in East Asian emerging-market countries, a substantial number of firms are owned and managed by controlling families (Claessens *et al.*, 2002). As to Korean studies, Joh (2003) and Baek *et al.* (2004) investigate Korean firms during the Asian financial crisis in 1997/8 and find that firms with concentrated ownership by controlling-family shareholders had lower firm value than firms with less concentrated ownership. Accordingly, family ownership is closely related to the type II agency problem, thereby decreasing firm value and quality of earnings.

Based on these two agency problems of family ownership, this study investigates the relation between family ownership and firm value and earnings quality in the post crisis period 2000-2008 using panel data set, a sample of publicly listed firms on the Korean Stock Exchange (KSE).

The Korean data provides a unique feature which is suited to investigate the impact of family ownership on firm value and earnings quality. First, almost Korean firms have been dominated by controlling shareholders and their families. Although, the classical problem for many emerging countries is that families dominate most aspect of the firm, Korean firms have a unique problem with these controlling families. Even though, controlling families own small fraction of shares, they control firms through pyramidal equity ownership using affiliated firms. In 2012, families owned only about 5.40% of shares among the top 10 business groups whereas affiliate ownership reached to almost 56% of shares (Chaebol.com (2012)), Ownership by the chairman and family of business groups in Korean). Thus, it is a very general way for families still able to exercise control whole group using affiliated firms. Prior studies in countries with dispersed ownership (e.g., US and UK) test agency problems using managerial ownership. However, managerial ownership in the US and UK usually, means shares owned by professional management not by a family. Therefore, research results on managerial ownership in the countries with well-developed separation of ownership-management (e.g., US and UK) can not be directly extended to emerging-market countries where managerial ownership consists of shares owned by families and their affiliated firms not by professional management. Ali *et al.* (2007) suggest that the extent to which family ownership may affect earnings quality depends on whether the difference in type I agency problems overrides the difference in type II agency problems or vice versa. In Korea to the extent that managers are one of families' members or fully controlled by controlling family shareholders, agency problems between managers and shareholders would be under both type I agency problem and type II agency problem.

Second, the business groups (so-called Chaebol) (the Korea Fair Trade Commission defines a chaebol as a group of firm of which >30% of shares are owned by the group's controlling shareholders and its affiliated firms) of Korea are controlled by families and controlling families have dominant management control power over the whole group despite their small fraction of shareholding as low as 10% (Jung and Kwon, 2002). This dominant family control is achieved through the holdings of the family and affiliated firms. Although, the owners of family firms

including Chaebol possess ultimate authority in the firm decision-making, they are not burdened with any responsibility for their management decision making. In addition, the controlling power of family members with voting rights in excess of their cash flow rights provides controlling shareholders of affiliated firms with more means and greater opportunities to expropriate firm resources for their private gains. Thus, they have incentives to expropriate other investors in the firm by investing the firm's resources to maximize their welfare and to manage earnings in order to maintain their control over the firm.

This study contributes to the literature in several ways. First in terms of family ownership, this study measures family ownership three different ways: family ownership, pure family ownership and affiliated ownership. Jang suggest that controlling family ownership using pyramidal structure is the most common features of Korean firms. Previous Korean studies (Joh, 2003; Kim and Yi, 2006) show that a higher control-ownership disparity was prevalent in Korea, thereby exacerbating agency problems and leading to low firm performance and earnings quality. Thus, it is important to classify family ownership into pure family ownership and affiliated ownership because pure family ownership and affiliated ownership can differently affect firm value and earnings quality. Specifically, unlike most prior studies this study uses affiliated ownership as a wedge La Porta *et al.* (2002) define the difference between control rights and cash flow rights) measure of ownership disparity to test agency problems of ownership disparity. Thus, using affiliated ownership is expected to provide more direct results between family ownership and firm value and earnings quality. Second Bagnoli *et al.* (2011) suggest that accounting research focuses on the effect of family ownership on earnings management (Wang, 2006) while finance research focuses on its effect on firm value (Choi *et al.*, 2007). This study comprehensively tests, the effect of family ownership using both accounting (ROA and accruals quality) and finance (Tobin's Q). Thus, this study extends prior research by comprehensively exploring the effects of family ownership on firm value and earnings quality.

Finally, this study utilizes panel data set unlike most previous study of Korea. The pooled-OLS and cross-sectional analysis, the general method in most previous study, treats time-series data of a firm just as different firms at a point in time but these methods do not control for unidentified inter firm difference. Accordingly, the results of this study is expected to provide more robustness evidence between family ownership and firm value and earnings quality.

Literature review and hypothesis development

Conflicts between owner and manager (type I agency problem):

The classic agency problem describes conflicts between owner and manager (Berle and Means, 1932; Jensen and Meckling, 1976). Berle and Means (1932) suggest that firm assets may be deployed to benefit managers rather than shareholders when shareholders are too dispersed. As Jensen and Meckling (1976) point out, agency costs of equity can arise when the interests of a firm's managers are not aligned with those of the firm's shareholders. Grossman and Hart (1980) claim that concentrated ownership helps solve the managerial agency problem proposed originally by Jensen and Meckling (1976) because large blockholders have the power and incentive to discipline management by holding undiversified and concentrated equity. Family ownership as a large blockholder has greater incentives to monitor managers, thereby reducing opportunistic behaviors of management. In addition, families are long-term investors (James, 1999) and have better knowledge on their business operations by serving as the firm's management (Anderson *et al.*, 2003). Therefore, family ownership plays an important role in corporate governance (Anderson *et al.*, 2003). Wang (2006) examines the impact of family ownership on earnings quality. The result shows that family ownership is positively associated with higher earnings quality (proxied by abnormal accruals, earnings response coefficients and conservatism), suggesting that family ownership has strong incentive to monitor management as long-term investors Ali *et al.* (2007) test the relation between family ownership and earnings quality using the same sample but different earnings quality measures with Wang (2006)'s study. Consistent with Wang (2006)'s study, they support that family firms have higher earnings quality and better disclosure quality than non-family firms. Thus, higher family ownership has incentive to produce higher firm value and earnings quality. Thus, under type I agency problem, family ownership as a large blockholder is expected to increase with firm value and earnings quality.

Conflicts of interests between controlling shareholders and outside minority shareholders (type II agency problem):

Excessive concentration of managers or controlling shareholders ownership might result in firm value reduction due to management entrenchment or increases in expropriation (Morck *et al.*, 1988). (Morck *et al.* (1988) show that the positive effects of high ownership concentration (aligning the interests of managers with those of shareholders) initially, dominate but the negative effects (management entrenchment) become more serious as the manager ownership increases to a high level) Shleifer and Vishny (1997) and La Porta *et al.* (1999) argue that family control is common

in most countries and the fundamental agency problem is conflict between controlling shareholders and outside investors, since controlling shareholders who gain nearly full control of the firm prefer to use assets to generate private benefits of control that are not shared by minority shareholders. La Porta *et al.* (1999) suggest that controlling shareholders can expropriate wealth by seeking personal benefits at the expense of minority shareholders. Bebchuk *et al.* (2000) and Claessens *et al.* (2002) argue that concentrated ownership creates the a new agency problem because the interests of the controlling shareholders and the minority shareholders are not perfectly aligned. Johnson *et al.* (2000a, b) also suggest that controlling shareholders can move resources away for their private benefits such as self-dealing and divert resources from one subsidiary in which they own less to firms in which they own more resulting in inefficient investment. The existence of controlling shareholders raise problems of "tunneling" which occurs when controlling shareholders expropriate the firm's assets at the expense of minority shareholders (Johnson *et al.*, 2000a, b). Due to information asymmetry, controlling shareholders have incentives to mask firm performance if truthful reporting increases the likelihood of outsider intervention which in turn limits their ability to extract private benefits from control. Thus, controlling family shareholders manage earnings to conceal their asset diversion activities and are not willing to dilute their control of the firm. Ball *et al.* (2003) find that earnings quality of four East Asian countries (Hong Kong, Singapore, Malaysia and Thailand) is low despite having common-law accounting regimes (e.g., IFRS and US GAAP). They interpret that controlling family ownership overrides incentives to report higher-quality earnings. Thus, higher quality of earnings is determined by the incentives of financial statement preparers (controlling family shareholders or family owner) not by legal/judicial or accounting regimes. Family ownership as a controlling shareholder may use its controlling position in the firm to extract private benefits at the expense of minority shareholders under type II agency problem, suggesting that the proportion of family ownership is expected to decrease firm value and earnings quality.

To summarize, family ownership is under both type I and type II agency problems. Under type I agency problem, family ownership as a large blockholder plays role in monitoring firm's management, increasing firm value and earnings quality whereas under type II agency problem, family ownership as controlling shareholders controls firm's management and extract private benefits at the expense of outside shareholders, decreasing firm value and earnings quality. Thus, family ownership may affect firm value and earnings quality depends on whether type I agency problem will override type II agency

problem or vice versa. Based on these arguments, the following competing hypotheses on the association between family ownership and firm value and earnings quality are to be tested.

- H_1 : family ownership is related to firm value and earnings quality:
- H_{1a} : if type I agency problem predominate, firm value and earnings quality of Korean firms are positively associated with family ownership
- H_{1b} : if type II agency problem predominate, firm value and earnings quality of Korean firms are negatively associated with family ownership

Most Korean firms are generally owned, controlled and managed by the family. According to Claessens *et al.* (2000) 80.7% of firms in Korea are managed by the controlling family and 42.6% of firms are controlled by pyramidal ownership structure. Controlling families also use cross-holdings of affiliated firms to strengthen their control. The controlling shareholder, usually the founder and his/her family, tends to play a dominant role in the decision-making in Korea (Lim and Kim, 2005). Controlling family shareholders control firms through a chain of ownership relation (pyramidal ownership). Jang *et al.* (2002) suggest that controlling family ownership using pyramidal structure is the most common features of Korean firms. La Porta *et al.* (1999) define a pyramid as a hierarchical chain by which a family controls a firm and cross-shareholding as a structure through which a controlled firm owns shares in its controlling shareholder or in the firms along that chain of control and is more common in countries with poor investor protection, especially in East Asian countries (La Porta *et al.* 1999).

This ownership structure in Korea permits controlling families to have dominant power at all levels of management and makes it easier to expropriate outside shareholders. The IMF and the World Bank note that dominant family control using affiliated firms was one of the primary causes of the financial crisis in 1997 and the biggest obstacle in improving of corporate governance in Korea. Thus, following hypothesis is to be proposed.

- H_2 : Affiliated ownership is negatively related to firm value and earnings quality

MATERIALS AND METHODS

Sample selection and data collection: This study uses panel data set of Korean firms listed on the Korean Stock

Table 1: Sample selection procedure and final sample size

Criteria: descriptions	No. of firm-year	
Panel A (summary of sample selection criteria)		
Firm listed on the KSE		644
Less: financial institution (e.g., SIC 65, 66 and 67)		52
Less: delisted firms		54
Less: firms with missing data		29
Total sample firms		509
Industry group	No. of firms (n = 509)	Ratio (%)
Panel B (number of sample firms, classified into SIC code and industry)		
Fishing and food	41	8.06
Textile and footwear	36	7.07
Wood product and other machinery	53	10.41
Chemical and rubber-plastic	104	20.43
Non-metallic products	68	13.36
Electronic and electric manufacture	63	12.38
Motor	36	7.07
General construction	34	6.68
Wholesale and retail	35	6.88
Others	39	7.66

Exchange (KSE) for 9 years (2000-2008). All financial institutions, e.g., commercial banks, insurance firms, security brokerage firms) are excluded because accounting methods and the format of financial statements differ to other industries and are subject to different regulatory requirements.

Ownership data in this study are manually collected from business reports of each firm on DART system data analysis, retrieval and transfer system (as a public database, Data Analysis, Retrieval and Transfer System (DART) is an electronic disclosure system that mandatorily enforces firms to submit Business Reports (equivalent to the US 10-K) to Korean Financial Supervisory Commission (KFSC) within 90 days from the fiscal year-end where it becomes publicly available to investors and other users online) (DART; <http://dart.fss.or.kr>), developed by the Korean Financial Supervisory commission, financial statements data and stock data are obtained from OSIRIS database, respectively. All extracted data were classified into SIC (Standard Industry Classification) code by the Korean National Statistical Office. The final sample consists of a total of 4,581 firm-year observations over the 9 year period. The sample firms belong to 10 industry groups based on the middle classification level of SIC (Table 1).

Model specification: This study uses the following two equations to test the impact of family ownership on firm value and earnings quality. In order to test the different impact of family ownership on firm value and earnings quality, three types of family ownership variables are employed: Family ownership (FAMILY), Pure Family ownership (PUREFAM) and Affiliated Ownership (AFFIL).

$$(\text{Firm value/Earnings quality})_{i,t} = \left\{ \begin{aligned} &\alpha + \beta_1(\text{FAMILY})_{i,t} + \beta_2(\text{FAMILY} \times \text{CHAEBOL})_{i,t} + \beta_3(\text{FOREIGN})_{i,t} + \beta_4(\text{CHAEBOL})_{i,t} \\ &\beta_5(\text{SIZE})_{i,t} + \beta_6(\text{LEV})_{i,t} + \beta_7(\text{GRW})_{i,t} + \beta_8(\text{PPE})_{i,t} + \beta_9(\text{LIQD})_{i,t} + \sum_{t=1}^{2001-2008} \delta_t(\text{YEAR})_t + \varepsilon_{i,t} \end{aligned} \right. \quad (1)$$

$$(\text{Firm value/Earnings quality})_{i,t} = \left\{ \begin{aligned} &\alpha + \beta_1(\text{PUREFAM})_{i,t} + \beta_2(\text{AFFIL})_{i,t} + \beta_3(\text{PUREFAM} \times \\ &\text{CHAEBOL})_{i,t} + \beta_4(\text{AFFIL} \times \text{CHAEBOL})_{i,t} + \beta_5(\text{FOREIGN})_{i,t} + \\ &\beta_6(\text{CHAEBOL})_{i,t} + \beta_7(\text{SIZE})_{i,t} + \beta_8(\text{LEV})_{i,t} + \beta_9(\text{GRW})_{i,t} + \\ &\beta_{10}(\text{PPE})_{i,t} + \beta_{11}(\text{LIQD})_{i,t} + \sum_{t=1}^{2001-2008} \delta_t(\text{YEAR})_t + \varepsilon_{i,t} \end{aligned} \right. \quad (2)$$

Measure of firm value: This study uses the accounting performance of firm (Return on Assets; ROA) and market performance of firm (Tobin's Q) as proxy of firm value. Return on Assets (ROA) is calculated by net income divided by total assets. Market performance is measured by market to book value to proxy of Tobin's Q, calculated by natural log of firm's market value of equity at the end of fiscal year divided by book value of equity at the end of fiscal year following Jung and Kwon (2002) (There is an insufficient Korean firms' preferred stock information on OSIRIS database. The prevalent method of approximate Tobin's Q is well described by Chung and Pruitt (1994)).

Measure of earnings quality: The definition of earnings quality varies by researchers. This study uses accruals quality as proxy for earnings quality. Net income (earnings) consists of cash flows from operations and total accruals. In accrual accounting, accruals are used to recognize revenues and expenses that make accounting information more relevant but accruals can be manipulated by management's opportunistic behavior. The cash flows are less manipulated by management but have less relevance. Dechow and Dichev (2002) argue that accruals are estimates of future cash flows and more represents future cash flows when accruals contain lower estimate error. Namely, accruals are recognized as a high quality when accruals quickly convert into future cash flow.

Accruals quality is measured following Francis *et al.* (2005) who adopted the modified Dechow and Dichev (2002)'s Model by McNichols (2002):

$$\text{TCA}_{i,t} = \alpha + \beta_1 \text{CFO}_{i,t-1} + \beta_2 \text{CFO}_{i,t} + \beta_3 \text{CFO}_{i,t+1} + \beta_4 \Delta \text{REV}_{i,t} + \beta_5 \text{PPE}_{i,t} + \varepsilon_{i,t} \quad (3)$$

Where:

I = Firm

t = Time

TCA = Total current accruals

CFO = Cash flow from operations, scaled by average total assets

ΔREV = Change in revenue scaled by average total assets

PPE = Gross property, plant and equipment

Since, the magnitude of accruals' components varies with firm size each component is scaled by average total assets.

Dechow and Dichev (2002) estimate accruals quality as the standard deviation of the residual using the past 8 years time-series regression for each firm. However in Korea, the direct application of Dechow and Dichev (2002) Model has some limitations because the number of Korean firms is relatively small and firms' financial data are not sufficiently cumulated to use long time-series regression (Nah, 2004). In order to solve these limitations, this study estimate the model in Eq. 3 pooled-cross-sectionally for all firms in the same year within each industry with at least 20 observations based on the Korean Information Services (KIS) 10-industry classification, following Srinidhi and Gul (2007) and Francis *et al.* (2005) (Srinidhi and Gul (2007) and France *et al.* (2005) use the Fama and French 48-industry classification. Similar to the Fama and French, Korean Information Services (KIS) classify industry having fewer than 10 sample firms are merged into similar industry because industry having fewer than 10 sample firms can not provide sufficient estimations). In addition, accruals quality for each firm is measured as the absolute value of firm-level residuals (In original Dechow and Dichev (2002)'s Model, accruals quality is measured as the standard deviation of firm-level residuals. However, they suggest the absolute value of firm-level residuals as alternative measure of accruals quality when sufficient long time-series data to estimate the standard deviation of residuals can not be used. Srinidhi and Gul (2007) use the absolute value of residuals as alternative measure of accruals quality following Dechow and Dichev (2002)'s suggestion) ($|\varepsilon_{i,t}|$) from industry level pooled cross-sectional regression of total current accruals on lagged current and future cash flows plus the change in REV and PPE.

Dechow and Dichev (2002) suggest that higher accruals quality is recognized when accruals quickly convert into cash flows. Thus in Eq. 3, the error term ($\varepsilon_{i,t}$) captures the extent to which accruals do not convert into cash flow realizations and can not be explained by the

change in revenue and PPE which is used as a measure of accruals quality. Accordingly, lower earnings quality is characterised by the larger absolute value of the residuals. Accruals quality is calculated as the absolute value of the firm-level residuals ($|\varepsilon_{i,t}|$), based on Eq. 3. Therefore, large (small) values of the absolute value of the firm-level residuals ($|\varepsilon_{i,t}|$) correspond to poor (good) accrual quality.

Measure of family ownership: This study defines Family ownership (FAMILY) as the percentage of equity shares owned by the largest shareholder and his/her family members and specially related shareholders with the largest-shareholder and its family, including stock held by affiliated firms, following The Korean National Tax Law Act and the Korean Stock Exchange Law (ownership data are obtained from firm's business report on DART system which disclose the name and percentage of shares held by the largest shareholder, his/her family members, affiliated firms, institutional shareholders and foreign shareholders). The Korean National Tax Law states that the controlling shareholder ownership is the total number of shares held by the largest shareholder, his/her relatives (A spouse, a blood relative within eight degrees of kinship or an in-law within four degrees of kinships), specially related person and affiliated firms (Article 20, The Korean National Tax Law Act). The Korean Stock Exchange Law defines largest shareholder as a person who together with any specially related persons (The major shareholder of the concerned company and that person's spouse and lineal ascendant and descendant. The spouse or lineal ascendant and descendant of an officer of the concerned company."(Article 54-5-(4), Korean Stock Exchange Law)) holds the largest number of stocks on the basis of the total number of stocks with voting rights of a firm (Article 54-5, Korean Stock Exchange Law).

As a definition of family ownership, family ownership can be decomposed into pure family ownership and affiliated firm's ownership. Pure Family ownership (PUREFAM) is defined as the percentage of equity shares owned by the largest personal shareholder and his/her families. Following Kim and Yi (2006), Affiliated ownership (AFFIL) is measured as the percentage of equity shares owned by the affiliated firms under the control of the largest personal shareholder and his/her families.

Control variables: Seven control variables that may affect firm value and earnings quality are foreign ownership, business group dummy, size, leverage, sales growth ratio, capital asset investment ratio and liquidity ratio. Foreign ownership (FOREIGN) is percentage of equity shares held

by all foreign shareholders as of the end of the year and calculated as the total number of shares held by foreign shareholders divided by the total number of shares outstanding. Shleifer and Vishny (1986) argue that large outside blockholders can effectively monitor management using enough voting control, thereby reducing agency problems. In Korea, the potentially positive impact of foreign ownership as large outside blockholders can mitigate family managerial opportunism. Thus, higher proportions of foreign ownership induce firms to improve firm value and to decrease opportunistic managerial accounting choices and decisions. To control for size effects, the natural logarithm of the book value of total assets (SIZE) is included as a proxy for firm size. Firms with high leverage or negative net income may have incentives to manage reported earnings due to their concerns over debt covenants or private lending agreement violations (Dhaliwal *et al.*, 1991; DeFond and Jambalvo, 1994). Leverage (LEV) is the ratio of total debts to total assets. Growth (GRW) is firm's sale growth ratio, measured by annual percentage change of sales. High growth firms are expected to increase firm value and earnings quality but they can be regarded as risky firms and inflate their earnings. To control these offset effects on firm value and earnings quality, growth option is included. Capital asset investment ratio (PPE) is calculated by firm's property, plant and equipment divided by sales. Firms with high PPE ratio might be more easily monitored by outside investors than firms with high intangible asset investment ratio, suggesting that firm value increase and management opportunity behaviors decrease. Liquidity ratio (LIQD) is measured by firm's total current assets divided by total current liability following Cho (1998) who finds a positive relation between managerial ownership and liquidity. In Korea, a large business group is called a Chaebol. Generally, the families of Korean Chaebol hold large proportion of shares but much less than the majority holdings of the firm. They are able to exercise effective control of the firm with holdings as low as 10%. This is possible through, the holdings of the family and their affiliated firms. Therefore, chaebol in Korea (listed firms with assets of 2 trillion KRW) are subject to many government regulations. In keeping with prior Korean studies (Joh, 2003; Kim and Yi, 2006; Choi *et al.*, 2007), this study uses size proxy for membership of a Chaebol dummy variable (CHAEBOL; takes the value of one if firms with asset of 2 trillion KRW (US\$2 billion) or more and zero otherwise) as a control variable to test the effect of family ownership as well as pure family ownership and affiliated ownership for Chaebol and non-Chaebol firms on firm value and earnings quality.

RESULTS AND DISCUSSION

Descriptive statistics: Table 2 shows the descriptive statistics for variables. The mean ROA and Tobin's Q as firm value, dependent variables are 0.014 and 0.976, respectively while the mean accruals quality, proxy of earnings quality is 0.078. The average family ownership is 0.357 which are relatively low compared to other East Asian countries where the average family ownership of Hong Kong is 0.489, Ng (2005) use managerial ownership as proxy of family ownership in Hong Kong because the correlation between managerial ownership and family ownership is almost one (0.978) Singapore is 0.571 (Chau and Gray, 2002) and Malaysia is 0.430 (Tam and Tan, 2007), respectively. The mean pure family ownership is 0.198 while affiliated ownership is 0.162. Foreign ownership has the mean value of 0.079 and the median value is 0.006. The severe difference between mean and median of foreign ownership implies that foreign ownership is concentrated in specific firms. This feature of foreign ownership supports that foreign shareholders prefer large manufacturing firms with good accounting performance, lower unsystematic risk and lower leverage but underweight smaller and highly leveraged firms (Kang and Stulz, 1997). In the sample of this study, foreign ownership concentrates in chemical and rubber-

plastic and electronics and electric manufacture industry groups, the most favorable industry of foreign investors in the KSE.

Correlations: Table 3 reports Pearson correlation among variables. All three family ownership variables; FAMILY, PUREFAM and AFFIL have positive sign with ROA but negative sign with Tobin's Q and Accruals Quality (AQ). These correlations suggest that as family ownership including pure family and affiliated ownership positively affects ROA and AQ increase. In contrast to ROA market firm value (Tobin's Q) is negatively related to all three family ownership variables. This suggests that stock prices as a measure of firm value are less likely to reflect all available information in inefficient stock market such as Korea (Joh, 2003). Foreign ownership (FOREIGN) has positive relation with both firm value (ROA and Tobin's Q) and AQ, suggesting that foreign shareholders improve firm value but do not decrease managerial opportunistic behavior. The positive correlation between FOREIGN and AFFIL as well as CHAEBOL supports that foreign shareholders in Korea prefer to invest business group.

The impact of family ownership on firm value and earnings quality: Table 4 reports the results of the pooled-OLS for family ownership and firm value and earnings quality. From the perspective of family ownership measured as the largest shareholders and their families and affiliated firms, the coefficient FAMILY (0.054 and 0.058) is significant at 0.01 level and positive for ROA. When Tobin's Q is used as a measure of market firm value, I find a significant positive relation between FAMILY and Tobin's Q (1.224 and 1.274) as well as ROA. The coefficient of Foreign ownership (FOREIGN) is positive for both ROA and Tobin's Q but only significant for Tobin's Q (3.320 and 3.381). This result partially indicates that foreign shareholders play a role in monitoring management as outside blockholders. The coefficient of Chaebol group

Table 2: Descriptive statistics

Variables	Mean	Median	Max.	Min.	SD
FAMILY	0.357	0.363	0.930	0.000	0.194
PUREFAM	0.198	0.201	0.788	0.000	0.163
AFFIL	0.162	0.067	0.887	0.000	0.187
FOREIGN	0.079	0.006	0.993	0.000	0.144
CHABOL	0.086	0.000	1.000	0.000	0.281
SIZE	20.331	19.120	26.911	12.091	1.459
LEV	0.532	0.489	27.327	0.018	0.725
GRW	0.133	0.056	30.363	-1.000	0.934
PPE	1.427	0.416	573.369	0.001	19.375
LIQD	1.733	1.313	33.355	0.002	1.658
ROA	0.014	0.031	1.509	-4.504	0.216
Tobin's Q	0.976	0.953	5.663	-8.520	1.435
AQ	0.078	0.024	3.644	1.48E-05	0.195

Table 3: Pearson correlation

Variables	ROA	Tobin's Q	AQ	FAMILY	PUREFAM	AFFIL	FOREIGN	CHAEBOL	SIZE	LEV	GRW	PPE
ROA	1											
Tobin's Q	-0.078***	1										
AQ	-0.002	0.019	1									
FAMILY	0.093***	-0.181***	-0.025***	1								
PUREFAM	0.057***	-0.136***	-0.009***	0.550***	1							
AFFIL	0.047**	-0.067***	-0.018***	0.562***	-0.379***	1						
FOREIGN	0.103***	0.427***	0.007***	-0.007	-0.173***	0.166***	1					
CHAEBOL	0.036*	-0.090***	0.027***	-0.090***	-0.215***	0.113***	0.379***	1				
SIZE	0.116***	-0.258***	0.006***	0.014	-0.193***	0.207***	0.477***	0.655***	1			
LEV	-0.289***	0.172***	0.009***	-0.155***	-0.119***	-0.054***	-0.079***	0.016	-0.060***	1		
GRW	0.125***	-0.147***	0.002	0.071***	0.036*	0.044**	0.051***	-0.003	0.029	-0.066***	1	
PPE	-0.004	-0.003	0.023	-0.008	0.026	-0.034**	-0.009	-0.011	0.054***	0.003	-0.004	1
LIQD	0.154***	-0.147***	-0.016**	-0.011	0.044**	-0.056***	0.096***	-0.152***	-0.174***	-0.178***	0.016	-0.030

*, **, *** Significant at level 0.10, 0.05, 0.01

Table 4: Relation of family ownership , firm performance and earnings quality

Variables	Proxy of firm valuation		Proxy of earnings quality			
	ROA	ROA	Tobin's Q	Tobin's Q	AQ	AQ
FAMILY	0.054*** (3.145)	0.058*** (3.398)	1.224*** (10.384)	1.274*** (10.829)	-0.131*** (-5.680)	-0.143*** (-6.177)
FAMILY*CHAEBOL		-0.110*** (-2.809)		-1.327*** (-4.892)		0.284*** (5.463)
FOREIGN	0.030 (1.136)	0.035 (1.327)	3.320*** (18.458)	3.381*** (18.826)	0.133*** (3.405)	0.112*** (2.865)
CHAEBOL	-0.055*** (-3.575)	-0.058*** (-3.258)	-0.387*** (-3.626)	-0.409*** (-3.316)	0.294*** (14.660)	0.398*** (17.313)
SIZE	0.018*** (6.774)	0.021*** (6.821)	0.112*** (6.241)	0.155*** (7.775)	0.067*** (18.687)	0.058*** (14.704)
LEV	-0.093*** (-21.003)	-0.092*** (-20.767)	-0.178*** (-5.783)	-0.167*** (-5.434)	0.011 (1.842)	0.009 (1.478)
GRW	0.039*** (4.832)	0.038*** (4.844)	0.305*** (5.512)	0.306*** (5.543)	-0.031 (-2.219)	-0.030** (-2.117)
PPE	-2.93E-05 (-0.176)	-3.84E-05 (-0.231)	0.002*** (1.475)	0.002*** (1.385)	-0.003 (-1.503)	-0.001 (-1.404)
LIQD	0.012*** (5.888)	0.012*** (5.912)	0.077*** (5.283)	0.073*** (5.027)	-0.007 (-1.684)	-0.005 (-1.296)
Constant	-0.315*** (-6.050)	-0.383*** (-6.124)	-4.273*** (0.0091)	-5.083*** (-12.872)	-1.176 (-16.411)	-1.005*** (-12.915)
Adj R ²	0.203***	0.205***	0.321***	0.327***	0.214***	0.223***
F-statistics	59.812	55.952	111.157	105.281	57.778	56.233
(p-value)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

t-statistics; *, **, ***Significant at level 0.10, 0.05, 0.01

dummy (Chaebol) is negative and significant with both ROA (-0.055) and Tobin's Q (-0.387) at 0.01 level. The coefficient on interaction of FAMILY and business group dummy (CHAEBOL) is negatively significant with both ROA (-0.110) and Tobin's Q (-1.327) at 0.01 level, respectively. This result strongly supports negative impact of Chaebol ownership on firm value, consistent with prior Korean studies (Joh, 2003; Baek *et al.*, 2004).

The relation between family ownership and Accruals Quality (AQ) support the alignment effect of family ownership. In Table 4, FAMILY is negatively significant with AQ at the 0.01 level. Namely, family ownership increases accruals quality, supporting that family owners have strong incentive to monitor management, consistent with Wang (2006) and Ali *et al.* (2007). Foreign ownership is weak with accounting measures (ROA and AQ) but strong with finance measure (Tobin's Q). Joh (2003) argues that accounting measure is better than finance measure, since accounting measure is more directly related to firm's profitability. Accordingly, weak relation between foreign ownership and accounting measures (ROA and AQ) implies that foreign shareholders do not efficiently monitor firm's management due to lacks of substantial knowledge for firm. Consistent with the negative result of firm value, AQ is positively related to both CHAEBOL dummy and interaction of FAMILY and CHAEBOL dummy (FAMILY*CHAEBOL).

Accordingly, Korean business groups (Chaebols) have low accruals quality, implying that Chaebols tend to

hide true firm performance by managing earnings. Thus, in Korea, the relation between family ownership and earnings quality supports the alignment effect of family ownership, thereby H_{1a} is accepted. However, H_{1a} is not applied to Chaebol firms where show strong entrenchment effect of family ownership (type II agency problem).

The impact of decomposed family ownership on firm value and earnings quality: Table 5 presents the relation between pure family ownership and affiliated ownership and firm value and earnings quality. As illustrated by results in Table 5, the impact of Pure Family ownership (PUREFAM) on firm value and accruals quality is quite similar to that of Family ownership (FAMILY). The coefficients of PUREFAM on both ROA (0.078 and 0.08) and Tobin's Q (2.074 and 2.096) are significantly positive. Consistent with family ownership, firm value increases with pure family ownership. Inconsistent with prior Korean studies (Joh, 2003; Kim and Yi, 2006), the coefficient of Affiliated ownership (AFFIL) is positive with both ROA (0.035 and 0.040) and Tobin's Q (0.571 and 0.626), respectively and negative with AQ (-0.512 and 0.142) at 0.01 levels. This result shows that the higher affiliated ownership does not negatively affect firm value and accruals quality. Accordingly, entrenchment effect does not exist despite increasing both pure family ownership and affiliated ownership. However, the impact of pure family and affiliated ownership for Chaebol groups are strongly negative for all firm value variables (ROA and Tobin's Q) and earnings Quality (AQ). In this study, mean

Table 5: Relation of pure family ownership, firm performance and earnings quality

Variables	Proxy of firm valuation				Proxy of earnings quality	
	ROA	ROA	Tobin's Q	Tobin's Q	AQ	AQ
PUREFAM	0.078*** (3.643)	0.080*** (0.8741)	2.074*** (14.205)	2.096*** (14.300)	-0.512*** (-5.229)	-0.142*** (-4.891)
PUREFAM* CHEABOL		-0.127 (-1.550)		-1.442** (-2.579)		-0.064 (-0.602)
AFFIL	0.035* (1.763)	0.040** (2.001)	0.571*** (4.264)	0.626*** (4.587)	-0.116*** (-4.313)	-0.151*** (-5.535)
AFFIL* CHEABOL		-0.096** (-1.967)		-0.968** (-2.932)		0.423*** (6.558)
FOREIGN	0.033 (1.281)	0.038 (1.456)	3.455*** (19.450)	3.506*** (19.728)	0.133*** (3.380)	0.120*** (3.059)
CHAEBOL	-0.054*** (-3.522)	-0.058*** (-2.303)	-0.357*** (-3.389)	-0.374 (-0.220)	0.293*** (14.626)	0.567*** (17.664)
SIZE	0.019*** (6.996)	0.021*** (7.471)	0.141*** (7.823)	0.175*** (8.862)	0.066*** (18.178)	0.058*** (14.654)
LEV	-0.093*** (-20.839)	-0.092*** (-20.630)	-0.158*** (-5.220)	-0.150*** (-4.943)	0.010 (1.768)	0.008 (1.451)
GRW	0.039*** (4.803)	0.038*** (4.818)	0.297*** (5.442)	0.298*** (5.473)	-0.031** (-2.170)	-0.029** (-2.058)
PPE	-2.50E-05 (-0.149)	-3.41E-05 (-0.205)	-0.002 (1.633)	-0.001 (1.551)	-0.003 (-1.518)	-0.002 (-1.415)
LIQD	0.012*** (5.845)	0.011*** (5.692)	0.073*** (5.142)	0.069*** (4.908)	-0.007** (-1.647)	-0.006 (-1.395)
Constant	-0.334*** (-6.298)	-0.396 (-6.843)	-4.917*** (13.636)	-5.574*** (-14.186)	-1.160 (15.867)	-1.007 (-12.836)
Adj R ²	0.204***	0.206***	0.342***	0.346***	0.214***	0.228***
F-statistics (p-value)	55.531 (0.000)	48.688 (0.000)	112.988 (0.000)	99.608 (0.000)	53.448 (0.000)	49.937 (0.000)

(t-statistics); *, **, *** Significant at level 0.10, 0.05, 0.01

value of affiliated ownership of Chaebol groups is 25.07% while that of non-Chaebol groups are 12.81%. In addition, mean value of pure family ownership of Chaebol groups (8.52%) are significant lower than that of non-Chaebol groups (26.62%). These outstanding differences of family ownership between Chaebol groups and non-Chaebol groups indicate that control via affiliated ownership is much significant in Chaebol groups comparing with non-Chaebol groups. There is a negative relation between PUREFAM (-0.512 and -0.142) and AFFIL (-0.116 and -0.151) and Accruals Quality (AQ). Namely, family ownership positively affects firm's accruals quality, thereby reducing management opportunistic behavior. This result supports that family ownership has a strong monitoring incentive and reduces the agency problem between managers and owners (Wang, 2006; Ali *et al.*, 2007). However, Korean Chaebols negatively impact firm value and earnings quality even after the Asian financial crisis, supporting Kim and Yi (2006). Accordingly, H_2 is not accepted but H_{2a} is able to be accepted in Chaebol firms because of strong entrenchment resulted from much large affiliated ownership.

Similar to the result of Table 4, Foreign ownership (FOREIGN) is significantly positive with Tobin's Q at 0.01 levels (3.455 and 3.506), suggesting greater impact on firm's stock price than firm's earnings. The impact of

FOREIGN on AQ is similar to the result of Table 4 as well. Accordingly, foreign shareholders improve firm value but do not efficiently monitor firm's management because of weak relationship with accounting measures (ROA and AQ).

Results of random effect analysis: As this study utilizes panel data, panel study methodology should be considered. Himmelberg *et al.* (1999) suggest that firm fixed effects estimators should be used in examination of the relationship between ownership and firm performance because the cross-sectional variation in ownership explained by unobserved firm heterogeneity is a firm fixed effect. However, Zhou (2001) argues that the firm fixed effect model in panel data is not appropriate in this setting because ownership typically changes slowly from year to year within a firm. Namely, the ownership-firm value relationship is likely to be a cross-sectional phenomenon. Following Zhou (2001), the random effect is estimated to check robustness as an alternative method to the fixed-effect estimation.

In study, I do not find that affiliated ownership reduces firm value and earnings quality. Rather, high affiliated ownership negatively effects firm value and earnings quality only in chaebol groups. In order to test robustness of the results shown in study, I conduct random-effect analysis.

Table 6: RE relation of pure family ownership, firm performance and earnings quality

Variables	Proxy of firm valuation				Proxy of earnings quality	
	ROA	ROA	Tobin's Q	Tobin's Q	AQ	AQ
PUREFAM	0.059** (2.395)	0.061** (2.447)	1.333*** (6.987)	1.305*** (6.804)	-0.108*** (-2.832)	-0.104*** (-2.742)
PUREFAM*CHEABOL		-0.126 (-1.334)		0.301 (0.447)		0.295** (2.216)
AFFIL	0.020 (1.763)	0.026 (1.156)	0.474*** (3.190)	0.536*** (3.540)	-0.065** (-2.019)	-0.081** (-2.487)
AFFIL*CHEABOL		-0.094* (-1.690)		-0.852** (-2.058)		0.323*** (3.755)
FOREIGN	0.007 (0.250)	0.011 (0.375)	3.715*** (19.105)	3.704*** (19.728)	0.098*** (2.215)	0.108** (2.386)
CHAEBOL	-0.054*** (-2.998)	-0.056** (-1.882)	0.136 (0.937)	0.528** (2.278)	0.254*** (9.167)	0.436*** (10.657)
SIZE	0.020*** (6.518)	0.023*** (6.867)	0.047*** (1.604)	0.062** (2.005)	0.065*** (12.692)	0.055*** (9.967)
LEV	-0.090*** (-19.949)	-0.089*** (-19.782)	-0.139*** (-5.807)	-0.138*** (-5.758)	0.006 (1.091)	0.005 (0.844)
GRW	0.042*** (5.953)	0.046*** (5.923)	0.226*** (5.721)	0.223*** (5.664)	-0.038** (-2.819)	-0.030** (-2.308)
PPE	-2.27E-05 (-0.114)	-3.15E-05 (-0.159)	0.0002 (1.633)	0.0002 (0.154)	-0.0002 (-0.815)	-0.0002 (-0.791)
LIQD	0.014*** (5.998)	0.013*** (5.887)	0.030*** (2.229)	0.029** (2.236)	-0.008** (-1.622)	-0.006 (-1.321)
Constant	-0.369*** (-5.977)	-0.432*** (-6.382)	-2.493*** (-4.404)	-2.777*** (-4.642)	-1.148 (-11.132)	-0.961*** (-8.937)
Adj R ²	0.182***	0.184***	0.171***	0.172***	0.096***	0.102***
F-statistics	78.612	63.496	72.811	58.830	33.819	20.368
(p-value)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

t-statistics; *, **, *** Significant at level 0.10, 0.05, 0.01

Table 6 presents the results of random-effect analysis. Overall, the results are quite similar with the results of pooled-OLS shown in Table 5. The coefficient of both pure family and affiliated ownership positively affects both firm value and earnings quality at 0.01 levels. Only the relationship between affiliated ownership and ROA is not significant. As expected, the coefficients of interaction on Chaebol groups and affiliated ownership are significantly negative with both firm value and earnings quality. However, pure family ownership of Chaebol groups negatively affects earnings quality only. This result indicates that controlling family shareholders of Chaebol groups have a dominant influence on firms they invest in using affiliated ownership, prevalent in Chaebol groups.

CONCLUSION

This study examines the impact of family ownership on firm value and earnings quality using 4,581 firm-year observations of Korean data over the 2000-2008 period. Specifically, I use three different measures of family ownership: family ownership, pure family ownership and affiliated ownership.

I find that family ownership increases firm value and accruals quality as well as pure family and affiliated ownership whereas the negative effects of affiliated

ownership for Chaebol groups on firm value and accruals quality is significant statistically. This finding supports that family ownership in Korea exhibit mitigates agency problems. Overall, family ownership reduces severe agency problems, thereby leading less opportunistic management behaviors. Consistent to prior Korean studies (Joh, 2003; Bae *et al.*, 2002), Korean business groups (Chaebols) show low firm value and accruals quality. Specifically, control via affiliated ownership is prevalent and primary factor of entrenchment in Chaebol groups. I find that foreign ownership is positively significant with market firm value (Tobin's Q) but negatively affects earnings quality. It can be interpreted as that foreign shareholders play a restrictive role in monitoring firms. It might support that foreign shareholders as large outside blockholders are transient investors without significant incentives to monitor firm management.

This study provides new evidence on the impact of family ownership on firm value and earnings quality. Many East-Asian studies (Fan and Wong, 2002; Claessen *et al.*, 2002; Ball *et al.*, 2003) suggest that family ownership decreases firms value and earnings quality because controlling families dominate firms at all levels of firm's decision-making processes and overrides incentives to report higher-quality earnings, thereby expropriating outside shareholders' wealth. However, this

study finds that family ownership in Korea is better aligned with the firm and thus higher family ownership increases firm value and earnings quality whereas family ownership in Chaebol groups still shows negative impact of firm value and earnings quality.

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