The impact of family ownership on firm value and earnings quality: Evidence from Korea

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Abstract

Korean listed firms exhibit some of the highest levels of family ownership in the world. This paper 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 to 2005. Existing studies show that family ownership may either reduce or aggravate agency problems, suggesting that family ownership overlaps between Type I and Type II agency problems. These unique characteristics of family ownership may affect firm value and quality of earnings. We classify family ownership into three categories: family ownership, pure family ownership, and ownership-control disparity. We find family ownership and pure family ownership is positively associated with firm value and earnings quality. This result supports that family ownership mitigates agency problems, thereby improving firm value and earnings quality. We find there is a non-linear relation (reverse U-shape) between family ownership and firm value measured by Tobin's Q. We do not find that high ownership-control disparity reduces firm value and earnings quality, despite consistency with expected sign.

1. Introduction.

Schleifer and Vishny (1986) and La Porta, Lopez-de-Silanes, and Shleifer (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. U.S. and U.K). 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 U.S. 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, Chen, and Radhakrishnan 2007): (1) Type I agency problem, the classic owner-manager conflict and (2) 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, Mansi, and Reeb 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). Further, Anderson and Reeb (2003) find that family firms have significantly better firm performance (measured by Tobin's Q) and lower cost of debt than non-family firms. It implies that family ownership has strong incentives to closely monitor manager and is likely to have better information on the firm. Wang (2006) examines the impact of family ownership on earnings quality. The result shows that family ownership is positively associated with higher earnings

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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's (2006) study. Consistent with Wang's (2006) 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.

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. Mørck, Shleifer, and Vishny (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. Since founding families have stronger incentives to pass the firm to their heirs, founding families view their firms as an asset to bequeath to family members or their descendents (Anderson *et al*. 2003). Accordingly, 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. (Schlze, Lubatkin, Dino, and Buchholtz 2001). In addition, controlling families are generally not willing to lose their control of the firm (Gomez-Mejia, Nunez-Nickel, and Gutierrez 2001). Specifically, in East Asian emerging-market countries, a substantial number of firms are owned and managed by controlling families (Claessens, Djankov, and Lang 2000). Fan and Wong (2002) suggest that controlling family shareholders in East Asian countries tend to take advantage of flexibility and discretion over accounting choice and auditor selection to distort the firm's true earnings performance. Ball, Robin, and Wu (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 U.S.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. As to Korean studies, Joh (2003) and Baek, Kang, and Park (2004) investigate Korean firms during the Asian financial crisis in 1997/8 and find that firms with concentrated ownership by controlling-family shareholders (*Chaebols*) 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.

This study investigates the relation between family ownership and firm value and earnings quality in the post crisis period 2000 to 2005 using a sample of publicly listed firms on Korean Stock Exchange (KSE). We propose two research questions: (1) In Korea, does family ownership mitigate or exacerbate agency problems? and (2) How family ownership affect firm value and earnings quality?

The Korean data provides a unique feature which is suited to the two research questions. 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 2002, families owned only about 8.62% of shares among the top 10 business groups[1], but they were still able to exercise control using affiliated firms. Prior studies in countries with dispersed ownership (e.g. U.S. and U.K) test agency problems using managerial ownership. For instance, Warfield, Wild, and Wild (1995) find that higher managerial ownership is positively associated with earnings informativeness and negatively linked with discretionary accruals, suggesting that firms with higher degrees of managerial ownership are expected to provide higher earnings quality. However,

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[1] Korean Stock Exchange (2003), *Ownership by the Chairman of Major Big Groups* in Korean

managerial ownership in the U.S. and U.K. 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. U.S. and U.K.) cannot be directly extended to emerging-market countries where managerial ownership consists of shares owned by families and their affiliated firms, not by professional management. 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 overlapped with Type I agency problem between owners and managers and Type II agency problem between controlling shareholders and outside minority shareholders. 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.*

This study contributes to the literature in several ways. First, in terms of family ownership, we measure family ownership three different ways: family ownership, pure family ownership, and ownership-control disparity[2]. Jang, Kim, and Kim (2002) 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 ownership-control disparity because pure family ownership and ownership-control disparity can differently affect firm value and earnings quality. Second, Bagnoli, Liu, and Watts (2007) 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, Park, and Yoo 2007). This study comprehensively tests the effect of family ownership using both accounting (ROA and accruals quality) and finance (Tobin's Q).

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[2] La Porta *et al.* (2002) define the difference between control rights and cash flow rights

2. The Feature of Family Ownership in Korea

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). 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 (Jang *et. al* 2002).

The business groups (so-called *Chaebol*)[3] 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

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[3] The Korea Fair Trade Commission defines a *chaebol* as a group of firms of which more than 30% of shares are owned by the group's controlling shareholders and its affiliated firms.

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 mange earnings in order to maintain their control over the firm.

3. Theoretical Framework and Research Question

3.1. 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 and Reeb 2003). Therefore, family ownership plays an important role in corporate governance (Anderson and Reeb 2003). Klein (2002) documents evidence that strong corporate governance mitigates management's opportunistic behavior, thereby decreasing earnings management. Thus, under Type I agency problem, family ownership as a large blockholder is expected to increase with firm value and earnings quality.

3.2. 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, Shleifer and Vishny 1988).[4] 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, Kraakman, and Triantis (2000) and Claessens, Djankov, Fan, and Lang (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, Boone, Breach, and Friedman (2000) 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, La Porta, Lopez-De-Silanes, and Sheleifer 2000). 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. Thus, 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.

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[4] Morck, Shleifer and Vishny (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

To summarize, family ownership is overlapped with 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 quality of financial reporting, 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 quality of financial reporting. 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*. Overall, we propose two research questions: (1) In Korea, does family ownership mitigate or exacerbate agency problems? and (2) How family ownership affect firm value and earnings quality?

4. Methodology

4.1. Sample Selection and Data Collection

This study uses Korean firms listed on the Korean Stock Exchange (KSE) for 6 years (2000-2005). However, Korean firms' data are for the fiscal years 1999 to 2006 because the measurement of accruals quality using Dechow and Dichev's (2002) model requires previous and future cash flows from operation (CFO) data. All financial institutions with two-digit Standard Industry Classification (SIC) Code[5] of 65, 66, and 67 (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.

Data in this study are obtained from three sources: The Korean Stock Exchange (KSE), firm's business report (equivalent to the US 10-K) and audit report, which are available for *Data Analysis,*

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entrenchment) become more serious as the manager ownership increases to a high level.

[5] SIC is a two-digit code classifying all industries into 20 major industry groups administered by the Korean National Statistical Office. The two-digit code designates each major industry group. This description is available on web source: http://www.nso.go.kr/eng2006/e06____0000/e06a___0000/e06a___0000.html.

Retrieval and Transfer System[6] (DART; http://dart.fss.or.kr), developed by the Korean Financial Supervisory Commission, OSIRIS[7]: Publicly listed companies worldwide provided by the Bureau van Dijk Electronic Publishing (BvDEP), and the Korean Information Service (KIS) database[8].

The sample firms in this study are consecutively listed on Korean Stock Exchange (KSE) from 1999 to 2006. At the first data collection stage, consecutive list status of sample firms is confirmed from KSE web (http://kind.krx.co.kr) using KSE stock index code. At the second stage, ownership data are all manually collected from business reports of each firm on DART system (http://dart.fss.or.kr) provided by Korean Financial Supervisory Commission. Financial statements data and stock data are obtained from OSIRIS and KIS database respectively. Finally, firm's name on KSE is used to match information among DART filings, OSIRIS, and KIS. Then, all extracted data were classified into SIC code. The final sample consists of a total of 3054 firm-year observations over the six year period. The sample firms belong to 10 industry groups based on the Korean Standard Industry Classification (SIC).

[Insert Table 1]

4.2. Model Specification

We test the impact of family ownership on firm value and earnings quality using three different types of family ownership variables: (1) family ownership (*FAMILY*), (2) pure family ownership (*PUREFAM*), and (3) ownership-control disparity (*WEDGE*).

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[6] 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.

[7] The financial statements information of Korean firms on OSIRIS is provided by the Korean Information Service (KIS).

[8] KIS is a credit rating agency in Korea and provides corporate financial and ownership information on publicly traded firms as well as privately held firms. KIS also receives financial and ownership information of Korean firms from the Korea Financial Supervisory Board and checks the integrity of the data. It provides the most

We use the following three equations to test the impact of family ownership on firm value and earnings quality. Taking into consideration prior research that has reported a non-linear impact of family ownership on firm value and earnings quality (Morck *et al.* 1988; McConnel and Sevaes 1995), the squared value of family ownership is employed.

$$FirmValue / EarningsQuality = \alpha + \beta_1 FAMILY + \beta_2 FAMILY^2 + \gamma_i (Control) + \varepsilon \qquad (1)$$

$$FirmValue / EarningsQuality = \alpha + \beta_1 PUREFAM + \beta_2 PUREFAM^2 + \gamma_i (Control) + \varepsilon \qquad (2)$$

$$FirmValue / EarningsQuality = \alpha + \beta_1 WEDGE + \gamma_i (Control) + \varepsilon \qquad (3)$$

4.3. Measure of Firm Value

This study uses the accounting performance of firm (Return on assets) and market performance of firm (Tobin's Q; Market to Book value) 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 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)[9].

4.4. Measure of Earnings Quality

The definition of earnings quality varies by researchers. We use 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

comprehensive database available in Korea.
[9] There is an insufficient Korean firms' preferred stock information on OSIRIS database. The prevalent method

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, LaFond, Olsson, and Schipper (2005), who adopted the modified Dechow and Dichev's (2002) model by McNichols (2002).

$$TCA_{i,t} = \alpha + \beta_1 CFO_{i,t-1} + \beta_2 CFO_{i,t} + \beta_3 CFO_{i,t+1} + \beta_4 \Delta REV_{i,t} + \beta_5 PPE_{i,t} + \varepsilon_{i,t}$$

(4)

where , for firm i and time t, and TCA is total current accruals; CFO is cash flow from operations, scaled by average total assets; ΔREV is change in revenue scaled by average total assets; PPE is 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 eight 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 equation (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) [10]. In addition, accruals quality for each firm is measured as the absolute value of firm-level residuals[11] ($|\varepsilon_{i,t}|$)from industry level pooled cross-

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[10] Srinidhi and Gul (2007) and France *et al.* (2005) use the Fama and French (1997) 48-industry classification. Similar to the Fama and French (1997), 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.

[11] In original Dechow and Dichev (2002)'s model, accruals quality is measured as the standard deviation of

of approximate Tobin's Q is well described by Chung and Pruitt (1994).

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 equation (3), the error term ($\varepsilon_{i,t}$) captures the extent to which accruals do not convert into cash flow realizations and cannot 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 ($\left| \varepsilon_{i,t} \right|$), based on equation (3). Therefore, large (small) values of the absolute value of the firm-level residuals ($\left| \varepsilon_{i,t} \right|$) correspond to poor (good) accrual quality.

4.5. 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[12]. 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[13], specially related person, and affiliated firms[14]. The Korean Stock Exchange Law defines largest shareholder as a person who together with any specially related persons[15] holds the largest

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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.

[12] 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.

[13] A spouse, a blood relative within eight degrees of kinship, or an in-law within four degrees of kinship

[14] Article 20, The Korean National Tax Law Act

[15] "*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*

number of stocks on the basis of the total number of stocks with voting rights of a firm[16].

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, subtracting affiliated firm's ownership from family ownership. Following La Porta *et al.* (2002) and Fan and Wong (2002), ownership-control disparity (*WEDGE*) is measured as the ratio between cash flow rights and voting rights of the largest shareholder and his/her family [1- (cash flow rights/voting rights)]. The closer the ratio is to one, the larger the disparity. Namely, if there is no affiliated ownership in firm, *WEDGE* is set to zero. As continuous variables, the ratio ranges between zero and one.

4.6. 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, Lee and Farger 1991; DeFond and Jiambalvo 1994).

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company."(Article 54-5-(4), Korean Stock Exchange Law)

[16] Article 54-5, Korean Stock Exchange Law

Leverage (*LEV*) is the ratio of total debts to total assets. 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, business groups 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 business group dummy variable [*B_GROUP*; takes the value of one if firms with asset of 2 trillion KRW (US$ 2 billion) or more; and zero otherwise] as control variable. 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.

5. Empirical Results

5.1. Descriptive Statistics

Table 2 shows the descriptive statistics for variables. The mean *ROA* and Tobin's Q as firm value, dependent variables, are 0.013 and 1.268 respectively, while the mean accruals quality, proxy of earnings quality is 0.0756. The average family ownership is 0.3513 which are relatively low compared to other East Asian countries, where the average family ownership of Hong Kong is 0.489,

(Ng 2005[17]) Singapore is 0.571 (Chau and Gray 2002), and Malaysia is 0.43 (Tam and Tan 2007) respectively. The mean pure family ownership excluding affiliated firm shareholding is 0.206 and ownership-control disparity called 'wedge' is 0.793. Foreign ownership has the mean value of 0.08 and the median value is 0.0079. 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).

[Insert Table 2]

5.2. Correlations

Table 3 reports Pairwise correlation among variables. Family ownership (*FAMILY*) and pure family ownership (*PUREFAM*) are positively related to ROA but negatively related to accruals quality (*AQ*), whereas ownership-control disparity (*WEDGE*) is positively linked with all three dependent variables (*ROA*, Tobin's Q, and *AQ*. These correlations suggest that as family ownership including pure family ownership increase, *ROA* and *AQ* increase, but the higher ownership-control disparity is, the accruals quality are. In contrast to *ROA*, market firm value (Tobin's Q) is negatively related to both *FAMILY* and *PUREFAM*, but positively related to *WEDGE*. This suggest 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 highly negative correlation between *WEDGE* and *PUREFAM* (-0.75) supports that pure family ownership and ownership-control disparity would differently impacts firm value and earnings quality.

[Insert Table 3]

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[17] 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)

5.3. The Impact of Family Ownership on Firm Value and Earnings Quality.

Table 4 reports the results of the regression for family ownership and firm value and accruals quality using the pooled sample of 3054 firm-year observation over the 2000 to 2005 period. We estimate linear and nonlinear regression model respectively.

From the perspective of family ownership measured as the largest shareholders and their families and affiliated firms, the coefficient *FAMILY* is significant at 1% level and positive for *ROA*, while the coefficient on the variable *FAMILY*^{2} is negative but insignificant. This suggests that accounting firm value (*ROA*) increases with an increase in family ownership. In contrast to prior research (e.g. Demsetz 1983), a nonlinear relation between family ownership and accounting firm value (*ROA*) does not exist in Korea. The positive impacts of family shareholding on firm value support the alignment effect of family ownership (Anders and Reeb 2003). When we use Tobin's Q as a measure of market firm value, we find a significant relation between *FAMILY* and *FAMILY*^{2} and Tobin's Q. The significant coefficients for *FAMILY* (positive) and *FAMILY*^{2} (negative) suggest a nonlinear relation (reverse U-shape) between family ownership and market firm value (Tobin's Q). This result is consistent with prior research (e.g. Demsetz 1983; Mock *et al*. 1988) suggesting that an increase in insider shareholding (family shareholding) could increase management entrenchment. The coefficient of foreign ownership (*FOREIGN*) is positive for both *ROA* and Tobin's Q but only significant for Tobin's Q. This result indicates that foreign shareholders play a role in monitoring management as outside blockholders (Sach and Warner 1995), thereby increasing firm value. The P-value of coefficient on business group dummy (*B_GROUP*) is negative and significant with ROA at 1% level (0.0003). This result is 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 1% level. In the quadratic model, *FAMILY* is still negatively significant with *AQ* (0.014) and *FAMILY*^{2} is positive but insignificant (0.195). 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). Contrast to the results on Tobin's Q, *FOREIGN* is positive but insignificant with *AQ*. 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 result of *ROA, AQ* is positively related to *B_GROUP*. Accordingly, Korean business groups (*Chaebols*) have low accruals quality, implying that *Chaebols* tend to hide true firm performance by managing earnings.

[Insert Table 4]

5.4. The Impact of Pure Family Ownership on Firm Value and Earnings Quality.

Table 5 presents the relation between pure family 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* (0.0028) and Tobin's Q (0.0595) are significantly positive. Consistent with family ownership, firm value increases with pure family ownership. In the quadratic model, however, both *PUREFAM* and *PUREFAM*^{2} are insignificant with two firm value proxies, *ROA* and Tobin's Q. Accordingly, there is no curvilinear relation between pure family ownership and firm value, suggesting that entrenchment effect does not exist despite increasing pure family ownership. Foreign ownership (*FOREIGN*) is significantly positive with Tobin's Q suggesting that foreign shareholders improve firm value. Similar to the result of Table 4, *B_GROUP* is significantly negative with *ROA* at 1% level. There is a negative relation between *PUREFAM* and accruals quality (*AQ*). The P-value of *PUREFAM* (0.0028) on *AQ* supports the alignment effects of family ownership (Wang 2006; Ali et al. 2007). Namely, pure family ownership increases firm's accruals quality, thereby reducing

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management opportunistic behavior. This result supports that family ownership has a strong monitoring incentive and reduces the agency problem between managers and owners. In the curvilinear test, *PUREFAM* is significantly negative (0.05) while *PUREFAM*^{2} is positive but insignificant. This is consistent with the results of firm value, supporting that the entrenchment effect of family ownership is evident. The impact of *FOREIGN* on *AQ* is similar to the result of Table 4. Accordingly, foreign shareholders improve firm value, but do not efficiently monitor firm's management because the relation between *FOREIGN* and accounting measures (*ROA* and *AQ*) is not significant. The P-value of coefficient on *B_GROUP* is significantly positive (0.0000) with *AQ*, consistent to the result of Table 4.

[Insert Table 5]

5.5. The Impact of Ownership-Control Disparity on Firm Value and Earnings Quality.

Table 6 indicates the results of ownership-control disparity (*WEDGE*) on firm value and accruals quality. Consistent with prior Korean studies (Joh 2003; Kim and Yi 2006), the coefficient of *WEDGE* is negative with both *ROA* and Tobin's Q respectively and positive with *AQ*, but statistically insignificant. Thus, the higher ownership-control disparity might decrease firm value and accruals quality, but the impact is weak and insignificant. The coefficient of *FOREIGN* is significant and positive with *ROA* and Tobin's Q at 10% and 1% level respectively, suggesting that foreign shareholders increase firm value, and greater impact on firm's stock price than firm's earnings. However, the relation between *FOREIGN* and *AQ* is significantly positive at 5% level, supporting that foreign shareholders do not efficiently monitor firm's management. As expected, the coefficient of *B_GROUP* is negatively significant with *ROA* and positively significant with *AQ* at both 1% level. Thus, Korean *chaebols* negatively impact firm value and earnings quality even after the Asian financial crisis, supporting Kim and Yi (2006).

[Insert Table 6]

6. Conclusion

This study examines the impact of family ownership on firm value and earnings quality using 3054 firm-year observations of Korean data over the 2000 to 2005 period. Specifically, we use three different measures of family ownership: family ownership, pure family ownership, and ownership-control disparity.

We find that family ownership increases firm value and accruals quality as well as pure family ownership, whereas the effects of ownership-control disparity (Wedge) on firm value and accruals quality is insignificant statistically despite consistency with expected sigh. Our 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. We find that foreign ownership is only significant with market firm value (Tobin's Q), suggesting 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 a*l. 2000 and 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 is better aligned with the firm, and thus higher family ownership increases firm value and earnings quality.

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No	Industry	Industry	Number of Firms (n = 509)	Ratio in Industry (%)
		Table 1 Sample Description by SIC code and Industries		
1	Fishing & Food	05. Fishing 15.Manufacture of Food Product & Beverages	41	8.06%
2	Machinery	17. Manufacture of Textiles, Except Sewn Wearing Apparel 18. Manufacture of Computers & Office Machinery 19. Manufacture of Electrical Machinery & Apparatuses	36	7.07%
3	Other Machinery	20. Manufacture of Electronic Components, Radio, TV & Communication Equipment & Apparatuses 21. Manufacture of Pulp, Paper and Paper Products 22. Publishing, Printing and Reproduction of Record Media 29. Manufacture of Other Machinery & Equipment 36. Manufacture of Furniture; Manufacturing of Articles	53	10.41%
4	Chemicals	23. Manufacture of Coke, Refined Petroleum Products and Nuclear Fuel 24. Manufacture of Chemicals & Chemical Products 25. Manufacture of Rubber & Plastic Products	104	20.43%
5	Metals	26. Manufacture of Other Non-metallic Mineral Products 27. Manufacture of Basic Metals 28. Manufacture of Fabricate Metal Products, Except Machinery & Furniture	68	13.36%
6	Electrics	30. Manufacture of Computers & Office Machinery 31. Manufacture of Electrical Machinery & Apparatuses 32. Manufacture of Electronic Components, Radio, TV & Communication Equipment & Apparatuses 33. Manufacture of Medical, Precision & Optical Instruments, Watches & Clocks	63	12.38%
7	Motors	34. Manufacture of Motor Vehicles, Trailer & Semi trailers 35. Manufacture of Other Transport Equipment	36	7.07%
8	Constructions	45. General Construction	34	6.68%
9	Trades	50. Sale of Motor Vehicles & Motorcycles; Retail Sale of Automotive Fuel 51. Wholesale Trade & Commission Trade, Except of Motor Vehicles & Motorcycles 52. Retail Trade, Except Motor Vehicles & Motorcycles	35	6.88%
10	Others	10. Mining of Coal, Crude Petroleum & National Gas 40. Electricity, Gas, Steam & Hot Water Supply 60. Land Transport; Transport Via Pipelines 61. Water Transport 62. Air Transport 63. Supporting & Auxiliary Transport Activities; Activities of Travel Agencies 64. Post and Telecommunications 72. Computer & Related Activities 74. Processional, Scientific, & Technical Services 87. Motion Picture, Broadcasting & Performing Arts Industries	39	7.66%

Table 2
Descriptive Statistics

	Mean	Median	Max	Min	Standard Deviation
FAMILY	0.351363	0.358850	0.929500	0.000000	0.192289
PUREFAM	0.206449	0.202800	0.788200	0.000000	0.168349
WEDGE	0.383143	0.273517	1.000000	0.000000	0.377834
FOREIGN	0.080588	0.007950	0.993000	0.000000	0.144262
B_GROUP	0.086444	0.000000	1.000000	0.000000	0.281065
SIZE	19.23005	19.04312	24.89039	12.09130	1.456380
LEV	0.535567	0.491883	26.47682	0.016854	0.727524
GRW	0.131054	0.055900	30.35670	-1.000000	0.954355
PPE	1.427994	0.418585	573.3689	0.000701	19.37460
LIQD	1.733112	1.312874	33.35541	0.001904	1.657786
ROA	0.013486	0.030600	1.508700	-4.524200	0.213433
Tobin's Q	1.268335	0.385650	288.0004	0.000199	6.912050
AQ	0.075608	0.022729	3.632068	1.48E-05	0.199123

Table 3
Correlation Matrix among Variables

	ROA	Tobin's Q	AQ	FAMILY	PUREFAM	WEDGE	FOREIGN	B_GROUP	SIZE	LEV	GRW	PPE	LIQD
ROA	1												
Tobin's Q	-0.257114	1											
AQ	0.020685	0.061637	1										
FAMILY	0.115026	-0.019895	-0.107780	1									
PUREFAM	0.073589	-0.033477	-0.148704	0.523348	1								
WEDGE	0.035113	0.055977	0.134612	0.182182	-0.746863	1							
FOREIGN	0.118781	0.168423	0.244658	-0.040576	-0.170987	0.213305	1						
B_GROUP	0.028418	0.099680	0.414559	-0.119717	-0.221492	0.230277	0.388706	1					
SIZE	0.161039	0.108179	0.381035	-0.024089	-0.213392	0.315781	0.472290	0.673355	1				
LEV	-0.389074	0.050760	0.028786	-0.149381	-0.123434	0.004463	-0.074985	0.024470	-0.052861	1			
GRW	0.043331	-0.007909	-0.014348	-0.009154	-0.021796	0.014074	-0.018204	-0.008750	-0.052217	-0.030168	1		
PPE	-0.011552	-0.008123	-0.009286	-0.082497	-0.055701	0.021572	-0.023072	-0.013726	0.022664	0.013409	-0.006652	1	
LIQD	0.137605	0.000212	-0.101229	-0.018232	0.039432	-0.058756	0.107117	-0.147197	-0.186965	-0.172579	-0.027013	-0.014218	1

Table 4
Relation of Family Ownership , Firm Performance and Earnings Quality

	Proxy of Firm Valuation				Proxy of Earnings Quality	
	ROA	ROA	Tobin's Q	Tobin's Q	AQ	AQ
FAMILY	0.048306	0.071363	0.542025	3.189742	-0.069487	-0.139655
	(0.0048)	(0.1692)	(0.2307)	(0.0198)	(0.0002)	(0.0149)
FAMILY^2		-0.033043		-3.796943		0.100295
		(0.6379)		(0.0404)		(0.1948)
FOREIGN	0.034444	0.033396	6.913517	6.793399	0.043054	0.046806
	(0.1847)	(0.2001)	(0.0000)	(0.0000)	(0.1782)	(0.1448)
B_GROUP	-0.055945	-0.056337	0.417415	0.372879	0.178867	0.180072
	(0.0003)	(0.0003)	(0.3088)	(0.3637)	(0.0000)	(0.0000)
SIZE	0.025293	0.025469	0.243283	0.263242	0.024353	0.023784
	(0.0000)	(0.0000)	(0.0047)	(0.0023)	(0.0000)	(0.0000)
LEV	-0.092799	-0.092553	-0.100874	-0.072732	0.006546	0.005769
	(0.0000)	(0.0000)	(0.3913)	(0.5391)	(0.1641)	(0.2237)
GRW	0.007095	0.007085	0.027890	0.028366	-7.38E-06	-3.65E-05
	(0.0477)	(0.0480)	(0.7504)	(0.7462)	(0.9984)	(0.9919)
PPE	-5.74E-05	-5.14E-05	-0.000548	0.000140	-0.000145	-0.000164
	(0.7315)	(0.7594)	(0.9012)	(0.9747)	(0.4047)	(0.3497)
LIQD	0.012767	0.012826	0.039539	0.046218	-0.002119	-0.002531
	(0.0000)	(0.0000)	(0.4755)	(0.4047)	(0.5488)	(0.4755)
Constant	-0.457917	-0.464223	-4.310406	-5.029020	-0.391490	-0.371265
	(0.0000)	(0.0000)	(0.0091)	(0.0029)	(0.0000)	(0.0000)
Adj R^2	0.195582	0.195361	0.073229	0.074278	0.192803	0.193019
F-Statistics	87.13072	77.45281	29.01070	26.28377	77.37407	68.98218
(P-Value)	(0.000000)	(0.000000)	(0.000000)	(0.000000)	(0.000000)	(0.000000)

Table 5
Relation of Pure Family Ownership, Firm Performance, and Earnings Quality

	Proxy of Firm Valuation				Proxy of Earnings Quality	
	ROA	ROA	Tobin's Q	Tobin's Q	AQ	AQ
PUREFAM	0.059626	0.008890	0.993005	1.948131	-0.069487	-0.119645
	(0.0028)	(0.8741)	(0.0595)	(0.1885)	(0.0161)	(0.0518)
$PUREFAM^2$		0.106038		-1.996597		0.139132
		(0.3332)		(0.4903)		(0.2448)
FOREIGN	0.039186	0.040716	6.995380	6.966503	0.043269	0.046431
	(0.1321)	(0.1183)	(0.0000)	(0.0000)	(0.1767)	(0.1486)
B_GROUP	-0.057401	-0.058471	0.423871	0.444022	0.183069	0.181886
	(0.0002)	(0.0002)	(0.2991)	(0.2780)	(0.0000)	(0.0000)
SIZE	0.026469	0.026420	0.260622	0.261541	0.022955	0.022787
	(0.0000)	(0.0000)	(0.0025)	(0.0024)	(0.0000)	(0.0000)
LEV	-0.092884	-0.093135	-0.092463	-0.087766	0.007665	0.007333
	(0.0000)	(0.0000)	(0.4309)	(0.4555)	(0.1028)	(0.1192)
GRW	0.007355	0.007334	0.032056	0.032347	-0.000190	-0.000210
	(0.0401)	(0.0407)	(0.7147)	(0.7122)	(0.9580)	(0.9537)
PPE	-6.98E-05	-7.66E-05	-0.000533	-0.000404	-0.000111	-0.000120
	(0.6755)	(0.6462)	(0.9038)	(0.9269)	(0.5244)	(0.4930)
LIQD	0.012507	0.012369	0.036867	0.039474	-0.000991	-0.001206
	(0.0000)	(0.0000)	(0.5051)	(0.4765)	(0.7784)	(0.7322)
Constant	-0.475525	-0.471285	-4.664773	-4.744335	-0.380895	-0.373332
	(0.0000)	(0.0000)	(0.0052)	(0.0046)	(0.0000)	(0.0000)
Adj R^2	0.195861	0.195843	0.073922	0.073750	0.190354	0.190466
F-Statistics	87.28328	77.68746	29.29698	26.08983	76.17567	67.87144
(P-Value)	(0.000000)	(0.000000)	(0.000000)	(0.000000)	(0.000000)	(0.000000)

Table 6

Relation of Ownership-Control Disparity (Wedge), Firm Performance, and

Earnings Quality

	Proxy of Firm Valuation		Proxy of Earnings Quality
	ROA	Tobin's Q	AQ
WEDGE	-0.010843	-0.311150	0.004561
	(0.1702)	(0.2311)	(0.6618)
FOREIGN	0.042929	7.593916	0.076813
	(0.0741)	(0.0000)	(0.0297)
B_GROUP	-0.054986	0.427902	0.191821
	(0.0001)	(0.3398)	(0.0000)
SIZE	0.025861	0.313025	0.022392
	(0.0000)	(0.0014)	(0.0000)
LEV	-0.121204	-0.230508	0.012078
	(0.0000)	(0.1748)	(0.0676)
GRW	0.006648	0.032439	-4.70E-05
	(0.0281)	(0.7247)	(0.9897)
PPE	0.000548	0.092825	-0.002600
	(0.8903)	(0.4772)	(0.6064)
LIQD	0.006963	0.036742	-0.005801
	(0.0002)	(0.5305)	(0.1592)
Constant	-0.426595	-5.305550	-0.381088
	(0.0000)	(0.0045)	(0.0000)
Adj R^2	0.240080	0.078601	0.193820
F-Statistics	102.5709	28.43666	70.75136
(P-Value)	(0.000000)	(0.000000)	(0.000000)