

# Revisiting Executive Pay in Family-Controlled Firms\* : Family Premium in Large Business Groups

December 2014

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## Abstract

According to the prior literature, family executives of family-controlled firms receive lower compensation than non-family executives. One of the key driving forces behind this is the existence of family members who are not involved in management, but own significant fraction of shares and closely monitor and/or discipline those involved in management. In this paper, we show that this assumption falls apart if a family-controlled firm is a part of a large business group, where most of the family members take managerial positions and own little equity stakes in member firms. Using 2014 compensation data of 564 executives in 368 family-controlled firms in Korea, we find three key results consistent with our prediction. First, family executives are paid more than non-family executives (by 27% more, on average) and this family premium is pronounced in larger business group firms even after accounting for potential selection bias concerns. Second, the drop in outside family influence is associated with the rise in pay to family executives. But, no such association exists with the pay to non-family executives. Third, within large business group firms, family premium is larger for business group chairs and in firms with low family cash flow rights. Lastly, we show that the existence of within-group labor market for non-family executives is not responsible for the family pay premium in large business group firms.

Key words: executive compensation, family firms, business groups, chaebols, internal labor market.

JEL classification: G30, G32, G34, G35

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\* We thank seminar participants at Seoul National University (SNU) Business School and Korea University Business School for their comments on our earlier drafts. We also thank Economic Reform Research Institute (ERRI) for sharing the compensation data with us.

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## 1. Introduction

According to the prior literature, family executives of family-controlled firms receive lower compensation than non-family executives. Using 82 family-controlled firms in the U.S. in 1988, McConaughy (2000) document that family CEOs are paid lower compensation than non-family CEOs. Likewise, Gomez-Mejia, Larraza-Kintana, and Makri (2003) report similar findings using a sample of 253 family-controlled firms in the U.S. during 1995-98.

In this paper, we revisit executive compensation in family-controlled firms, and empirically show that *family discount* often found in U.S. stand-alone firms cannot be generalized into other types of family firms. Our prediction is that *family discount* disappears or even switches into *family premium* if a firm is a part of a large business group.

One of the key driving forces behind the *family discount* in U.S. stand-alone firms is the existence of family members who are not involved in management, but own significant fraction of shares and closely monitor and/or discipline those involved in management. In this paper, we show that this assumption falls apart if a family-controlled firm is a part of a large business group, where most of the family members take managerial positions and own little equity stakes in member firms.

We predict that, in the absence of other family members playing a monitoring or disciplining role, family executives in large business group firms would set their pay at a high level, leading to a premium over non-family executives. This family pay premium is reinforced by control-enhancing mechanisms (e.g., pyramiding and cross shareholdings) that entrench family executives even from non-family outside shareholders. Lastly, pay

premium may be reinforced further as most large business groups have an internal managerial labor market. In the absence of outside job opportunities, pay to non-family executives may be depressed as firms would not compete to retain them with lucrative pay packages.

We test these predictions using family-controlled firms in Korea. We believe Korea provides an ideal setting to test our hypotheses as it is dominated by a wide range of family-controlled firms: Small stand-alone firms at one extreme and large business groups, at the other extreme. Using 2014 compensation data of 564 executives in 368 family-controlled firms in Korea, we find three key results consistent with our prediction. First, family executives are paid more than non-family executives (by 27% more, on average) and this family premium is pronounced in larger business group firms even after controlling for potential selection bias problems. Second, the drop in outside family influence is associated with the rise in pay to family executives. But, no such association exists with the pay to non-family executives. Third, within large business group firms, family premium is larger for business group chairs and in firms with low family cash flow rights. Lastly, we show that the existence of within-group labor market for non-family executives is not responsible for the family pay premium in large business group firms.

This study contributes to the literature on executive compensation in a number of ways. First, it deepens our understanding on how family and non-family executives are paid in family-controlled firms. As mentioned earlier, existing research focus on stand-alone family firms (McConaughy, 2000; Gomez-Mejia, Larraza-Kintana, and Makri, 2003). In this paper, we investigate a wider spectrum of family firms and show how a business group structure

affects the pay to family executives relative to that to non-family executives. In doing so, we examine the monitoring/disciplining role played by other family members that do not manage, but own shares.

Second, we contribute to the studies that examine the relationship between ownership structure and compensation. Cheung, Stouraitis, and Wong (2005) study the relationship between managerial ownership and pay in closely held Hong Kong firms. Urzúa (2009) study the relationship between controller's cash flow rights and board compensation using Chilean business group firms. Amoako-Adu, Baulkaran, and Smith (2011) compare dual versus single class firms in terms of executive compensation using Canadian firms. They do not explicitly investigate the existence of family-premium, but show that the positive association between wedge (votes controlled by insiders/equity owned by insiders) and pay is stronger for family-executives than for non-family executives. However, Cheung, Stouraitis, and Wong (2005) and Urzúa (2009) do not investigate the difference between family- and non-family executives. Also, Cheung, Stouraitis, and Wong (2005) and Amoako, Baulkaran, and Smith (2011) do not investigate the difference between group versus non-group firms. None of the studies examine the influence of outside family members.

More broadly, we contribute to the studies on pay differentials. That is, to the question of what explains the cross-sectional variation in CEO compensation, we provide evidence that affiliation to family or to business group matters on the level of executive pay. In recent years, the literature identified a number of new factors explaining pay differentials. These include, inter alia, institutional ownership (David, Kochhar, and Levitas, 1998; Hartzell and

Starks, 2003), external directorate networks (Geletkanycz, Boyd, and Finkelstein, 2001), superior management abilities (Combs and Skill, 2003), stakeholder management (Coombs and Gilley, 2005), CEOs' superstar status (Wade et al., 2006; Malmendier and Tate, 2009), CEO's general management skills (Custodio, Ferreira, and Matos, 2013; Datta and Iskandar-Datta, 2014), firm headquarter's living environment (Deng and Gao, 2013), CEO optimism (Otto, 2014), and firm's prestige (Maug, Niessen-Ruenzi, and Zhivotova, 2014).

This paper is organized as follows. Section 2 develops the key hypotheses of this paper. Section 3 gives an institutional background of executive compensation in Korea. Section 4 describes the data and the empirical strategies. Section 4 reports the empirical results, and section 5 concludes.

## **2. Hypotheses Development**

### *A. Executive Compensation in Family-Controlled Stand-Alone Firms*

According to the prior literature, family executives of family-controlled firms receive lower compensation than non-family executives (McConaughy, 2000; Gomez-Mejia, Larrazakintana, and Makri, 2003). Why is it the case? Explanations in the existing literature can be summarized into three. First, not all family members are involved in management. Some are directly involved, while others are not. These second group of family members, however, are not just bystanders. They play an important role of monitoring and disciplining family-executives, and because of their multidimensional and long-term relationship with family-executives, they are quite good at playing their role (Fama and

Jensen, 1983; McConaughy, 2000). Thus, the compensation level of family-executives is kept at its necessary minimum.

Second, family executives enjoy benefits that cannot be enjoyed by non-family executives. They receive dividends from their ownership stakes, and enjoy higher job security (Gomez-Mejia, Larraza-Kintana, and Makri, 2003). Family-executives may trade such benefits for lower compensation. Third, family-executives are handcuffed. Emotional attachment to the firm makes them unlikely to compete in the external job market, and take more lucrative outside offers (Gomez-Mejia, Nuñez-Nickel, and Gutierrez, 2001; Gomez-Mejia, Larraza-Kintana, and Makri, 2003; Wasserman, 2006). This lessens the need to reward family-executives with pay packages typically paid to lure or retain professional executives.

These explanations, however, are likely to be viable when the family-controlled firm is a stand-alone firm and not a part of a business group. With only one firm under family control, only a limited number of family members can take managerial positions. A large fraction of family members, with no managerial positions, will simply hold shares as outsiders. With their welfare heavily dependent on the prosperity of the firm, however, these outside family owners will have a strong incentive to carry out their monitoring role and make sure that family-executives do not overpay themselves. Availability of dividend income, job security, and absence of outside job offers will serve as justifications to demand a low compensation level to family-executives.

### *B. Executive Compensation in Family Controlled Business Group Firms*

Will family discount documented in the prior literature remain intact in a country setting where stand-alone firms are not a norm? We predict that family discount disappears or even switches into family premium if a firm is a part of a large business group.

There are three key features of a large business group that may bring about such outcome. First, the existence of multiple firms within a business group may matter. With multiple firms under family control, almost all the family members can be involved in management. With so many managerial positions available for family members, it becomes hard to find family members simply holding shares as outsiders. In their absence, their monitoring and disciplining roles also disappear.

Second, family-controlled business groups are typically formed by pyramiding, circular shareholdings, or a combination of the two, which allows families to control the whole business group without holding large fraction of shares in each individual member firm (Claessens, Djankov, and Lang, 2000; Faccio and Lang, 2002). In this setting, family-executives in one member firm is not likely to closely monitor those in other member firms as they have little incentive to pay for the costs of monitoring. Control-enhancing mechanisms also raises family control rights often high enough to entrench them effectively from outside forces, such as proxy contests or takeover threats.

Third, business groups typically have an internal labor market for their non-family executives, who may move across firms within the same group, but seldom between two different groups (Khanna and Yafeh, 2007). Since they do not have job opportunities outside the group, firms do not compete to retain them with lucrative pay packages.

Consequently, their pay level tends to be lower than otherwise. Presence of powerful family executives in the board may lower their pay level even further.

### *C. Hypotheses*

From our analyses in Section B, we extract four sets of testable hypotheses. We first test if family-executives are paid more than non-family executives in family-controlled firms, and then see if this family pay premium is pronounced in large business groups. Within large business groups, we also test if family premium is an increasing function of business group size. Larger business groups have greater number of member firms, have lower family ownership in each individual member firm, and have larger internal labor market for their non-family executives. All these point to a greater family pay premium.

**Hypothesis 1:** *Family-executives are paid more than non-family executives in family-controlled firms*

**Hypothesis 1a:** *Family pay premium in family-controlled firms is pronounced in large business group firms.*

**Hypothesis 1b:** *Family pay premium in family-controlled firms increases with the size of business group.*

One of the key differences between business group firms and stand-alone firms that lead to a family premium is the absence or near absence of family members who own shares, but do not manage. With their welfare heavily dependent upon the prosperity of the firm, they



have a strong incentive to carry out their monitoring role and make sure that family-executives do not overpay themselves. Also, they are effective in doing so as they have multidimensional and long-term relationship with family-executives (Fama and Jensen, 1983; McConaughy, 2000). They exert influence over family-executives not only as company shareholders, but also as family members who would have frequent occasions to interact with the family-executive. It could be at a friendly family gathering or at a serious family meeting assembled to make decisions on family ownership or succession issues. Thus, we expect the pay to family-executives in family-controlled firms to rise with the drop in outside family influence. However, we do not expect outside family ownership to have much influence over the pay to non-family executives. The relationship between outside family shareholders and non-family executives is one-dimensional (manager-shareholder relationship) and relatively short-term. On top of this, the absence of outside job opportunity may set the pay to non-family executives sufficiently low regardless of outside family ownership.

**Hypothesis 2a:** *Pay to family-executives in family-controlled firms rises with the drop in outside family influence*

**Hypothesis 2b:** *Pay to family-executives in family-controlled firms does not rise with the drop in outside family influence*

Even if outside family shareholders do have influence against family executives, we expect their influence to be different depending upon the status of family executives. We

investigate if the family member with the group chair title enjoys an extra premium. They have the highest rank among family members and because of this reason they may be less disciplined by other family members.

**Hypothesis 3:** *Family premium in family-controlled large business group firms is higher for group chairs.*

Lastly, we investigate if the existence of within-group labor market for non-family executives is responsible for the family pay premium in large business group (LBG) firms. According to the existing literature, internally hired executives are paid less than externally hired executives (Deckop, 1988; Murphy and Zábojník, 2004; and Bidwell, 2011). If LBG firms hire their non-family executives internally, thanks to the internal executive labor market they form, and as a consequence pay them less, one would observe family pay premium in LBG firms not because family-executives are paid lavishly, but because non-family executives are paid meagerly. To investigate this possibility, we test the follow two hypotheses.

**Hypothesis 4a:** *The fraction of internally-hired non-family executives is higher in large business group (LBG) firms than in others.*

**Hypothesis 4b:** *Internally-hired non-family executives are paid less than those externally hired.*

### **3. Executive Compensation in Korea**

#### *A. Why Use Korean Data?*

We test our hypotheses using family-controlled firms in Korea. We believe Korea provides an ideal laboratory setting for a number of reasons. First, it is dominated by a wide range of family-controlled firms: Small stand-alone firms at one extreme and large business groups, also known as chaebol groups like Samsung and Hyundai Motors, at the other extreme. This feature allows us to investigate how family premium varies with the size of business group.

Second, chaebol groups have a large number of member firms. As of April 2014, Samsung, Hyundai Motors, SK, LG, and Lotte – also known as the Big Five – respectively have 74, 56, 80, 61, and 74 member firms. Also, the extensive use of pyramiding and circular shareholding by chaebol groups renders family executives to have control rights high enough to entrench themselves from outside shareholders and to have cash flow rights low enough to lose interest in monitoring other family executives (Kim, Lim, and Sung, 2007). These features exactly match with the circumstances that lead to an absence of monitoring and disciplining, not only among family members, but also by outside non-family shareholders.

Third, in chaebol groups, the level of family ownership varies considerably across member firms. Firms on the top of a pyramid or those with controlling position over other member firms typically have high family ownership, whereas those in the opposite extreme have little (Kim, Lim, and Sung, 2007). This feature makes it possible for us to investigate

how premium paid to family executives varies with the size of shares held in aggregate by family members other than the family executive under analyses.

### *B. Prior Empirical Studies using Korean Data*

There are only a handful of papers that study the compensation of Korean executives. The first paper, Kato, Kim, and Lee (2007), studies the pay-performance elasticity of 246 KOSPI200 firms during 1998-2001, and find that cash compensation of Korean executives is significantly related to stock market performance and that the magnitude of elasticity is comparable to that of the U.S. and Japan. They further show that such overall significant link is driven by non-chaebol firms and no such link exists for chaebol firms.

Garner and Kim (2013) studies the relationship between foreign share ownership and pay-performance sensitivity of 164 KOSPI200 firms during 2001-2006, and find that firms with high foreign ownership demonstrate high sensitivity, while those with low ownership do not, even after controlling for the potential self-selection bias. Shin et al. (2014) studies the determinants and the effects of executive pay multiples (the ratio of executive pay over worker pay) using KOSPI firms during 2000-2009, and find that pay multiples has a statistically significant negative relation with subsequent operating and stock return performance. They show that the result is robust to corrections for endogeneity.

### *C. Institutional Background*

There are a number of reasons behind this dearth of research. First, the level of executive pay multiple is too low to make executive compensation a core governance problem for

Korean firms. According to some academic studies, the multiples are 5.6 for KOSPI200 firms during 1998-2001 (Kato, Kim, and Lee, 2007) and 7.6 for KOSPI firms during 2000-2009 (Shin et al., 2014). This is in great contrast to the 2013 U.S. figure (CEO-to-worker pay ratio) of 331, according to AFL-CIO. Naturally, academics paid little attention to executive compensation of Korean firms.

Second, for many years, Korea government maintained a very opaque disclosure rule on executive compensation. According to the disclosure guidelines set by the Financial Supervisory Service (FSS), Korea's financial supervisory authority, companies should disclose aggregated cash compensation figures separately for (i) directors (excluding outside directors and audit committee members), (ii) outside directors (excluding outside directors serving audit committee), and (iii) audit committee members or internal auditors, but not disaggregated compensation figures at the individual director or executive level.<sup>1</sup> Table A in the Appendix to this paper shows an example of this disclosure using Samsung Electronics. This disclosure practice made it inevitable for prior researchers to use compensation data aggregated over multiple directors or executives.

Third, no Korean firm discloses information concerning its executive compensation policy, such as a performance target, its measurement and evaluation methods, and the way pay relates to evaluation results. This is somewhat surprising for Korean firms that must secure shareholders' approval, according to the Commercial Code, on the upper limit of following year's aggregate compensation, before making payments to their directors and

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<sup>1</sup> Contrary to cash compensation, data on the holdings of company shares and stock options are available at the individual director level.

internal auditors. Unlike the case of say-on-pay in the U.S., this shareholders' vote on the upper limit is legally binding in Korea. A couple of factors, including the low level of executive pay multiples and the indifference of Korean institutional investors allowed Korean firms to secure shareholders' approval without giving out much information concerning compensation details. Table B in the Appendix to this paper shows an example how the upper limit of Samsung Electronics' FY2013 aggregate pay is disclosed.

#### *D. The New Disclosure Rule*

A number of recent events, however, led Korea to make progress in its own executive compensation disclosure practices. First, immediately following the global financial crisis of 2008, a series of policy measures were taken outside of Korea with the aim of curbing excessive CEO pay or strengthening its transparency.<sup>2</sup> Such movement, coupled with some high executive pay incidents involving Korean firms, heightened public interest over executive compensation even in Korea.<sup>3</sup> Second, academics and lawmakers expressed concerns over the compensation packages that executives of chaebol group member firms receive. They claimed that the pay is set by the group chairman to ensure their loyalty to him, but not to other shareholders (*Hankyoreh*, August 13 2013). They called for the disclosure of executive pay at the individual director level and actually submitted bills in

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<sup>2</sup> Examples of international initiatives include the adoption of *Principles for Sound Compensation Practices and its Implementation Standards* by the Financial Stability Board in 2009, the adoption of *Pillar 3 Disclosure Requirement for Remuneration* by the Basel Committee in 2010, and the adoption of *Capital Requirement Directive (CRD) III Remuneration Rule* by the European Union in 2011. At country levels, U.S. adopted say-on-pay following the Dodd-Frank Act and U.K. adopted the *Revised Remuneration Code* following the Financial Services Act of 2010.

<sup>3</sup> For example, in 2009, Samsung Electronics paid 43.1 billion Korean won (approximately, 43 million U.S. dollars) to its four inside directors.

2006 and in 2009 to mandate this. Confronted against chaebols' resistance, however, both attempts failed at the National Assembly. Lastly, Japan made a move in 2010 requiring firms to disclose pay at the individual director level (if the total pay director receives is greater than 100 million Japanese yen). This left Korea to be one of the very few OECD countries that do not require such a disclosure practice.

Against this backdrop, the Korean government submitted a bill revising the *Capital Market and Financial Investment Service Act* in June 2012 that eventually passed the National Assembly in April 2013, and promulgated in May 2013. According to the new rule, any director or internal auditor whose total pay exceeds 500 million Korean won (approximately 500 thousand U.S. dollars) must disclose its individual pay and the details of the criteria/methods used to set the pay in the company business reports (including quarterly and semi-annual reports). Table C in the Appendix to this paper shows how this is disclosed using Samsung Electronics as an example.

Just a few weeks before the new rule's effective date, 29<sup>th</sup> November 2013, Financial Service Commission (FSC) and Financial Supervisory Service (FSS) jointly released guidelines on the details of the disclosure rule. First, it clarified the coverage of total pay to include labor income (salary, bonus, and incentive pay), retirement income, and realized gains from stock option exercises received since the beginning of last fiscal year.<sup>4</sup> Second, it expanded the firms subject to the new rule to include all KRX listed firms, non-listed firms that publicly offered securities in previous years, and non-listed but externally audited

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<sup>4</sup> Bonus and incentive pays are both cash-based compensations paid on top of salary. Incentive pay is based on a pre-established performance criterion, whereas bonus is not (e.g., bonus paid regularly on national holidays).

firms with more than 500 security investors. Third, it made it clear that directors or internal auditors subject to the new rule include not only those that served the full fiscal year, but also those dismissed before the fiscal year-end. Fourth, the FSC/FSS guideline made it mandatory to breakdown total pay into labor income, retirement income, and other income (including stock option gains), but left the disclosure of detailed criteria/methods at company's discretion. Table D in the Appendix to this paper shows how these are disclosed using Samsung Electronics as an example.

The first set of firms subject to the new rule was those that disclosed the 3<sup>rd</sup> quarter report after November 29 (the effective date of the new rule). But, there were not many. Most firms disclosed individual pay for the first time at the end of March 2014. These are firms with fiscal year ending in December, which take up 97% of KRX firms, and the firms that constitute the sample of this paper.

## **4. Sample and Methodology**

### *A. Sample*

We start with a sample of directors and internal auditors from KRX-listed firms that disclosed compensation at the individual level on March 31<sup>st</sup>, 2014.<sup>5</sup> From this original sample of 641 (418 firms), we first exclude directors or internal auditors from firms whose fiscal year ends in March. These are insurance companies and securities firms the executives of which received pay exceeding 500 million Korean won over a three-quarter

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<sup>5</sup> This original sample includes 418 firms, which is approximately 25% of 1,666 KRX-listed firms (as of March 31, 2014). KRX firms include those in the KOSPI index and the KOSDAQ index.



period (Q2 – Q4, 2013). We exclude them since their pay does not cover a full fiscal year, and therefore not comparable to those of executives from other firms.<sup>6</sup> This drops down the sample size to 612 (398 firms). Second, we exclude outside directors, non-resident directors, and internal auditors from the sample as we do not consider them as company executives. In this paper, we consider only resident inside directors as executives. This drops down the sample size to 607 (395 firms).

Finally, we limit our analyses to family-controlled firms, which we identify in the following steps. First, bank holding companies and their member firms are not considered as family-controlled. Korean law prohibits individuals from holding direct or indirect controlling equity stakes in bank holding companies. Second, as for member firms of KFTC-designated large business groups (LBGs), we follow the distinction made by the Commission that tracks down whether the ultimate controlling shareholder of each business group is an individual or a company.<sup>7</sup> If a group is controlled by an individual, member firms of this group are considered as family-controlled. Large Korean chaebol groups, such as Samsung, Hyundai Motors, and LG, fall in this category. On the other hand, if a group is controlled by a company, member firms of this group are not considered as family-controlled. These include firms under the control of former state-owned enterprises (SOEs), such as POSCO, KT, or KT&G that have a dispersed share ownership structure

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<sup>6</sup> Since July 2014, however, their total pay during a full fiscal year (Q2 2013 – Q1 2014) is available. At the time of this writing, we are in the process of adding them into our sample.

<sup>7</sup> To identify firms under control, KFTC takes into account not only (i) the share holdings of a person or a company in question, but also those of related-parties (spouse, relatives within a certain degree of kinship, not-for-profit organizations and firms under a common control), (ii) the person's or the company's influence over the appointment of directors, the business entry and exit decisions, and (iii) the extent of personnel exchanges and related-party transactions. For detailed discussion on this, see Kim, Lim, and Sung (2007).

with no particular controlling shareholder.

Third, as for firms outside these KFTC-designated large business groups, we identify their ultimate controlling shareholders ourselves by manually going through their company business reports and 5 percent block holder filings. We first identify their largest shareholder and classified a firm as not family-controlled if it is a government agency, a foreign entity, a commercial bank, or a private equity fund. If the largest shareholder is a non-bank domestic company, we investigate the next layer of control. That is, the largest shareholder of this non-bank domestic company. Again, if it is a government agency, a foreign entity, a commercial bank, or a private equity fund, the original company is classified as not family controlled. All other firms are classified as family-controlled. Excluding non-family controlled firms left us with a sample of 564 executives in 368 firms.

### *B. Methodology*

In this paper, we run a series of cross-sectional *OLS* regressions, where Total Pay (sum of salary, bonus, incentives, retirement pay, and stock option gains), in natural logarithm, is regressed on Family (a family executive dummy that takes a value of 1 if an executive is a family member, and 0 otherwise) and a battery of controls (20 control variables plus 50 industry fixed effects). We explain the details of these controls in the next section. Equation (1) below shows the basic specification we use in this paper:

$$\ln(\text{Total Pay})_i = \beta_0 + \beta_1 \text{Family}_i + XB' + \delta_j + \varepsilon_i \text{ ----- (1)}$$

$X$  is a matrix of control variables,  $B$  is a vector of coefficients, and  $\delta_j$  is a fixed effect for industry  $j$ . A large and a statistically significant  $\hat{\beta}_1$  suggests the existence of a family premium. Note that coefficient standard errors are heteroscedasticity-consistent robust standard errors, clustered at the firm level.<sup>8</sup> We also identify and exclude influential observations before estimating our regressions. Such observations are identified by the Cook's distance, which measures the aggregate change in the estimated coefficients when each observation is left out of the estimation (Cook, 1977).<sup>9</sup> Following the convention, we drop an observation if its value of Cook's distance is greater than  $4/N$ , where  $N$  is the number of observations.

For Equation (1) to be a valid specification, executives should be assigned randomly across firms independent of our outcome variable. But, for a number of reasons, this may not be the case. First, family members have the power and the incentive to become executives in member firms with high Total Pay. So, they may self-select to do so, while non-family executives do not as they have no such power (*selective inclusion of family-executives in high-paying firms*). This will lead to an upward bias in  $\hat{\beta}_1$  (the coefficient estimate on Family). Second, if non-family executives are in general paid less than family-executives, they will show up mostly in firms with high Total Pay. This is because, in low-paying firms, they are likely to be paid less than the 500 million Korean won threshold and

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<sup>8</sup> There is 1 firm with six executives, 4 firms with five executives, 7 firms with four executives, 34 firms with three executives, and 86 firms with two executives.

<sup>9</sup> Cook's distance for observation  $i$  is  $D_i = \sum_{j=1}^n (\hat{Y}_j - \hat{Y}_{j(i)})^2 / (pMSE)$ , where  $\hat{Y}_j$  is the prediction from the full regression model for observation  $j$ ,  $\hat{Y}_{j(i)}$  is the prediction for observation  $j$  from a refitted regression model in which observation  $i$  has been omitted.  $p$  is the number of fitted parameters in the model, and  $MSE$  is the mean square error of the regression model.

drop out from the sample (*selective sample exclusion of non-family executives from low-paying firms*). This will lead to a downward bias in  $\hat{\beta}_1$ .

Third, family-executives may show up in our sample only when they are highly paid. This can take place when family-executives try to evade pay disclosure by cutting down their own pay below the 500 million Korean won threshold. Since it is relatively easier to cut down pay below the threshold when paid slightly above it, this selective sample exclusion may predominantly take place in firms, from which they are lowly paid (*selective sample exclusion of family-executives from low-paying firms*). This will lead to an upward bias in  $\hat{\beta}_1$ .<sup>10</sup> Figure 2 shows a symptom of this. If one takes a close look at the histogram of Total Pay in Chart C for family-executives in large business group firms, the two bins just above the 500 million Korean won threshold (500-600 and 600-700) have observations smaller than that between 700 and 800 million Korean won.

We address these potential selection bias problems in the following way. First, we estimate Equation (1) after limiting our sample to those where both types of executives disclose compensation. In this paper, we call this sample of firms with at least one family-executive and at least one non-family executive as ‘paired samples.’ By dropping firms with only one type of executives (either family or non-family), we believe we can rule out, to a large extent, the possibility of family members self-selecting to become executives

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<sup>10</sup> We do not find evidence of family executives stepping down from the board intentionally to evade disclosure. The fraction of deregistering family executives out of a total of registered family directors in large business group firms are 6.5%, 5.1%, 3.1%, and 2.4% respectively during 2010, 2011, 2012, and 2013. But interestingly, this fraction jumps to 12.64% in 2014 (to be exact, at their 2014 shareholders’ meeting in March). Any future study using the 2014 compensation data should be aware of this that may cause a serious self-selection bias problem.

only in high-paying firms. By doing so, we also believe we can rule out the possibility of low paying firms being mostly composed of family-executives. Second, we estimate Equation (1) after dropping executives paid between 500 and 700 million Korean won. Given the shape of the distribution we see in Figure 2 Chart C, we believe that some family-executives expected to be paid within this range deliberately lowered their pay to evade disclosure, whereas those expected to be paid above 700 million Korean won did not.

Another challenge in using Equation (1) arises when we conduct subsample tests or tests using paired samples. Given the large number of control variables (20 control variables plus 50 industry fixed effects) we use, smaller sample size lowers our degrees of freedom to a level that makes it very difficult to reject our null hypothesis even if it were to be false. To overcome this low power problem, we adopt the method in Core, Holthausten, and Larker (1999) and in Gomez-Meija, Larraza-Kintana, and Makri (2003) that collapses the constant and the fitted value of controls into one variable called a control composite.<sup>11</sup> Equation (2) shows the new specification:

$$\ln(\text{Total Pay})_i = \beta_1 \text{Family}_i + \gamma \text{Composite}_i + \varepsilon_i \text{ ----- (2)}$$

By construction, the estimated coefficients  $\hat{\beta}_1$  in Equation (1) and that in Equation (2) are identical, but with different standard errors, as Equation (2) uses a much greater degrees of freedom.

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<sup>11</sup> If we use the notation in Equation (1), the control composite is equal to  $\hat{\beta}_0 + X\hat{B}' + \hat{\delta}_j$ . The coefficient estimate of  $\gamma$  in Equation (2), by construction, is always “1.”

Lastly, we face a challenge when interacting the family executive dummy in Equation (1) with ownership variables, as they are highly correlated with each other and may result in a multicollinearity problem. This is particularly problematic when we test how family premium changes with the level of executive's share ownership or dividend income. As is shown in the next section, family-executives have significantly higher share ownership and higher dividend income than non-family executives. To address this problem, we capture family premium as a separate variable and regress this on ownership variables and other determinants. Equation (3) shows this specification.

$$\text{Family Premium}_i = \alpha_0 + \alpha_1 \text{Ownership}_i + \alpha_2 \text{Other Factors}_i + e_i \text{ ----- (3)}$$

Family Premium can be measured by the  $\ln(\text{Total Pay})$  of a family-executive minus the average  $\ln(\text{Total Pay})$  of non-family executives working in the same company. But, this reduces the sample size considerably as there is only a limited number of firms where both types of executives disclose compensation (i.e., from 564 to 187). We overcome this sample size problem by using the predicted values of non-family executives'  $\ln(\text{Total Pay})$  in lieu of their actual values. That is, getting the fitted values of Equation (1) when the family-executive dummy is set to be zero. This fitted value, in effect, captures the level of  $\ln(\text{Total Pay})$  a non-family executive would have received if he or she has traits exact same as the family-executive. Given the list of control variables we use, they are identical in age, title, tenure, likelihood of a dismissal, and the number of firms giving compensation. By construction, the mean value of this family premium is exactly same as the coefficient

value on the family-executive dummy in Equation (1).

## 5. Empirical Results

### A. Summary Statistics

Table 1 gives the definitions of each variable we use in this paper. Panel A lists the definitions of compensation-related variables and Panels B, C, and D, respectively list the definitions of executive-, firm-, and group-level variables. Compensation-related variables come from Economic Reform Research Institute (ERRI) that manually collected the data from each company's business report.<sup>12</sup> Many other variables, including Dismiss, Ownership, Group Dividend, No. of Directorship, Wage, No. of Board Meetings, are also collected manually.

One of the key variables of interest is LBG, which take a value of 1 if a firm is a member of a *large* business group, designated by Korea Fair Trade Commission (KFTC) either in 2013 or in 2014, and 0 otherwise. We use both years, 2013 and 2014, because KFTC designates large business groups each year not at year-end but in April. Also note that KFTC designates a business group as large if the aggregate asset size of its member firms is greater than 5 trillion Korean won.<sup>13</sup> Since we include only family-controlled firms in our sample, large business groups in our sample are large family-controlled business groups, which are more popularly known as chaebols. Note that for regulatory reasons

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<sup>12</sup> Business reports can be electronically retrieved from the Data Analysis, Retrieval, and Transfer System (DART), which is administered by Financial Supervisory Service (FSS).

<sup>13</sup> To be more precise, KFTC uses a concept called fair assets, which is the book value of assets for non-financial companies, but book value of equity for financial companies.

KFTC has been designating these groups since 1987. For more details on KFTC's designation of large business groups firms, see Kim, Lim, and Sung (2007).

Cash Flow Rights and Wedge are also obtained following the methods introduced in Kim, Lim, and Sung (2007). Cash flow right is the sum of controlling family's direct and indirect ownership. Family includes the controlling shareholder, its spouse, and relatives within certain degrees of kinship (six with the controlling shareholder and four with the spouse). Wedge is the difference between controlling family's control (or voting) rights and cash flow rights. Control rights is the fraction of common shares held by family members, non-family executives, affiliated not-for profit organizations, and member firms.

Figure 1 shows a series of bar charts that compare the total pay (in million Korean won, which is approximately 1 thousand U.S. dollars) of family and non-family executives in family-controlled firms. In Chart A, we do not require each sample firms to have both types of executives, whereas in Chart B, we do. Each chart has three pairs of bars, the first including a combined sample of large business group firms and others, the second including only large business group firms, and the third including the remaining. Notice that sample size shrinks considerably from 564 to 187 when we move from Chart A to Chart B (paired sample). Also notice that there are slightly less large business group firms ( $n = 254$ ) than others ( $n = 310$ ) in our sample.

The bar charts in Figure 1 show evidence consistent with our prediction that family premium exists and that this premium is pronounced in large business group firms (*Hypotheses 1 and 1a*). If we focus on Chart B that uses paired sample to correct for potential selection bias problems, the overall family premium is approximately 860 million



Korean won. This is equivalent to 76% of non-family executives' average total pay of 1,133 million Korean won. If we move to the subsample of large business group firms, the premium increases to 1,280 million Korean won, which is 114% of non-family executives' average total pay of 1,125 million Korean won.

Examples of family premium in large business group firms abound. One example is the family premium at Hyosung, a flagship company at Hyosung Group. S. R. Cho, a family representative director with a title of Chairman & CEO, is paid 3.9 billion Korean won (approximately, 3.9 million US dollars), whereas Sang-Woon Lee, a non-family representative director with a title of Vice Chairman & CEO, is paid 1.1 billion Korean won during 2013. Another example is from Hyundai Motor Company from Hyundai Motor Group. Eui-Sun Chung, a family director with a title of Vice Chairman, is paid 1.8 billion Korean won, whereas Choong Ho Kim, a non-family director with a title of President & CEO, is paid 0.9 billion Korean won during 2013. In firms outside the large business groups, one can find examples of family discount. For example, Chang-Gul Cho, the founder of Hanssem and its Co-Chairman is paid 0.6 billion Korean won, whereas Yang-Ha Choi, a non-family Co-Chairman and CEO is paid 1.5 billion Korean won during 2013. Another example is at Dong-A Socio Holdings. Jung-Seok Kang, a family representative director with a title of President & CEO, is paid 1.1 billion Korean won, whereas Dong-Hun Lee, a non-family representative director with a title of CEO & Executive Vice President, is paid 1.3 billion Korean won during 2013.

In unreported analyses, we reproduce Chart A separately for representative directors and non-representative directors. We find similar patterns in both of the subsamples. The

premium paid to family representative directors is 576 million Korean won if affiliated to a large business group and -283 million Korean won if not. The premium paid to family non-representative directors is 452 million Korean won if affiliated to a large business group and only 24 million Korean won if not.

Table 2 gives summary statistics of each variable used in this paper. In Panel A, we give summary statistics of our compensation-related variables separately for family-executives and non-family executives. Mean or median value of each type of compensation tells us that family premium is driven by salary. If family executives are risk averse and have the discretion to choose one among different types of compensation to overpay themselves, they would naturally choose the one that does not vary with their performance.

Also notice that there is a family discount for retirement pay and gains from stock option exercises. This is not surprising since family-executives seldom retire and by Korean law are not eligible to receive stock option grants. Another noteworthy finding is about executive pay multiples. They average 22-25 and reach up to 167-273. The figures are much greater than those of Kato, Kim, and Lee (2007) and Shin et al. (2014) as we do not have executives paid less than 500 million Korean won in our sample.

Panel B compares executive-level variables between family-executives and non-family executives. One can see that family-executives are slightly older and are more likely to be a representative director. Note that representative director is a legal institution unique in Korea that is equivalent to a chief executive officer (CEO) in other countries. They are resident executives who sit on the board and represent the company. But, a given firm may have multiple representative directors. On other executive-level variables, there is a

considerable difference between family-executives and non-family executives. Family executives are more likely to have longer tenure, less likely to be dismissed, hold more directorships (paying and non-paying), hold greater fraction of company shares, receive greater amount of dividend income from the company, and more likely to be a business group chairman.

Panel C compares firm-level variables between large business group firms and others. One can see that large business group firms, compared to others, are larger, older, but less profitable with lower stock returns. They have lower family ownership, but higher wedge between control and cash flow rights. They have higher employees' wage, larger board size, higher fraction of outside directors, and higher foreign ownership. Panel D gives the summary statistics of group size, in natural logarithm, for large business groups designated by KFTC either in 2013 or in 2014. The panel is split between groups below the sample median (16.31) and those above. One can see that there is a considerable variation in group size.

#### *B. Family Discount or Family Premium?*

We first test if family-executives are paid more than non-family executives in general. That is, testing the existence of a family premium. We estimate Equation (1), where  $\ln(\text{Total Pay})$  is regressed on the family-executive dummy and a host of executive- and firm-level control variables. Coefficient standard errors are heteroscedasticity-consistent robust standard errors, clustered at the firm level. Influential observations are identified and dropped if Cook's distance is greater than  $4/N$ , where  $N$  is the number of observations.

Executive-level controls include the executive's age, the title (1 if a representative director, and 0 otherwise), the tenure (number of years served as the firm's director since 1998, which is the first year DART provides company business reports on-line), the executive's dismissed during fiscal year, and the number of firms, from which the executive receive total compensation above 500 million Korean won. Table 1 gives detailed definition for each of these variables. We expect age, tenure, title, and the number of paying firms be positively associated with total pay. The coefficient on the dismissal dummy is, however, à priori ambiguous. The coefficient is likely to be negative if dismissed directors receive a pay falling short of a full-year's compensation. It may, however, be positive if dismissed directors receive a large retirement pay, which is also a part of total pay.

Firm-level controls include firm size, firm value, firm performance (ROA), firm risk (firm age, R&D/Sales, systematic risk, unsystematic risk), ownership (family cash flow rights and wedge), employee's wage, and governance (outside director ratio, board size, number of board meetings, and foreign ownership). Again, Table 1 gives detailed definition for each of these variables. We expect firm size, firm value, firm performance, R&D/Sales, systematic risk, unsystematic risk, and employee's wage to be associated positively with total pay. As for firm age, cash flow rights and governance, we expect them to be associated negatively.<sup>14</sup> We also expect systematic risk that measures uncontrollable business risk to

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<sup>14</sup> As for the relationship between family cash flow rights and compensation, the results in the existing literature are mixed. Cheung, Stouraitis, and Wong (2005) show that CEO-pay increases and then falls with either CEO or family ownership (inverse U-shape), whereas Urzúa (2009) shows a strong negative relation between chair and board compensation and controllers' cash-flow rights in group-affiliated firms. Barontini and Bozzi also show a strong negative association between the two. Cheung, Stouraitis, and Wong (2005) study closely held Hong Kong firms during 1995-1998. Urzúa (2009) study a 6-year sample of controller-dominated, concentrated-ownership firms in Chile. Barontini and Bozzi (2011) use firms listed on the Milan

be associated with pay more strongly than unsystematic risk. We have no prior expectation for wedge.<sup>15</sup> In the Korean context, where dual class equity is not permitted, higher wedge basically means higher share ownership by affiliated firms. If it entrenches the controlling family from outside shareholders, it may increase the pay to family-executives. But, if it strengthens outside monitoring by the affiliated firms, it may decrease the pay to non-family executives.

Table 3 shows the estimation results. Column (2) adds 2-digit industry fixed effects to column (1). Column (3) switches 2-digit to 4-digit industry fixed effects (comparable to 2-digit US SIC). Column (4) adds two more firm performance variables (lagged ROA and stock return) and two more firm risk variables (systematic risk and unsystematic risk). Regardless of the specification we use, the coefficient on the family-executive dummy is positive, economically large, stable, and statistically significant, at the 1 percent level (*Hypothesis 1*). The coefficient of 0.2876 in column (4) means that the total pay family-executives receive is 28.8 percent greater than that non-family executives receive (notice that our dependent variable is in natural logarithm). This is much greater than the difference we see in our univariate analyses in Figure 1 (Chart A).

Most of the control variable coefficients are also consistent with our prior expectations. Executive's age, title, tenure, firm size, firm value, ROA, R&D/sale, employee's wage are associated positively with total pay, whereas firm age, family cash flow rights and board

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Stock Exchange over the period 1995-2002.

<sup>15</sup> The results in the existing literature are also mixed. Amoako, Baulkaran, and Smith (2011) show that executives are paid more from dual-class companies than from single-class companies, using companies with concentrated control listed on the Toronto Stock Exchange (TSX) between 1998 and 2006. Barontini and Bozzi (2011), on the other hand, find a strong negative association between wedge and executive compensation using firms listed on the Milan Stock Exchange over the period 1995-2002.

size are associated negatively. The dismissal dummy takes a positive coefficient, suggesting that dismissed executives may have received a large retirement pay. Also, the coefficient on wedge is negative, suggesting the possibility of affiliated firms exerting pressure on the pay to non-family executives. All other variables are insignificant.

### *C. Robustness Checks on the Existence of Family Premium*

Next, in Table 4, we conduct a series of robustness checks to our findings in Table 3. In column (1), we limit the sample to large business group firms and add group fixed effects. In column (2), we re-estimate the regression in Table 3 column (4) after removing executives with total pay above the 99th percentile value (6,213 million Korean won) as outliers. The distribution of total pay is heavily skewed and a small number of extremely highly paid family-executives might drive the result. In column (3), we remove the heads of large business groups (i.e. group chairperson). Because of their rank, they are usually paid more than others, but the position is never taken by non-family executives. This may inflate the family premium. In column (4), we scale executive's total pay with the average wage of company employees (i.e. executive pay multiple). In column (5), we remove the executives receiving retirement pay or realizing capital gains from stock option exercises, as these types of compensation are one time in nature and show up mostly among non-family executives. In column (6), we remove executives with total pay less than 700 million Korean won to address the selection bias problem that may arise when family-executives who are paid slight above the 500 million Korean won threshold deliberately cut down their own pay below the threshold to evade disclosure requirement. In column (7), we limit our

sample to those where both types of executives disclose compensation (i.e. paired sample) to address the selection bias problems that may arise when family members choose to become executives in firms with high total pay or non-family executives drop out of sample firms with low total pay as they are paid below the 500 million Korean won threshold from these firms.

The coefficients on family-executive dummy are positive, economically large, and statistically significant at the 1% level across all specifications. The coefficients in columns (2) and (4) are almost identical to our base regression result in Table 3 column (4), suggesting that the removal of executives with total pay above the 99 percentile value or replacing total pay with executive pay multiples hardly make a difference. On the other hand, the coefficient in column (3) is slightly smaller, indicating that heads of large business groups do receive extra pay. In contrast, the coefficient in column (5) is larger, indicating that retirement pay or stock option gain has a tendency of inflating total pay for non-family executives. Lastly, the coefficients on columns (1) and (7) are considerably larger, suggesting that family premium is more evident when focusing on firms within a given group and that non-family executives drop out of our sample mostly from firms that tend to pay low, and that this causes a downward bias in the coefficient estimate in our base regression.

In Table 5, we regress each type of compensation (salary, bonus, incentives, retirement pay, stock option gains, and others) on the same set of regressors we use in column (4) of Table 3 to see if family premium we find in Tables 3 and 4 exist across different types of compensation. The results show that family premium exists only in salary. As for retirement

pay and gains from stock options, we find a family discount. But, given the large fraction of salary out of total pay (71% for family-executives and 39% for non-family executives), the family premium in salary dominates the family discount in retirement pay or gains from stock options, which is why we see a family premium in total pay in Tables 3 and 4.

*D. Does Business Group Size Matter?*

In Table 6, we test if the level of family premium is greater in large business group (LBG) firms than in others. As discussed in Section 2, we predict that family premium is larger if a firm is a part of a business group than those that are not. But, we do not have information enabling us to identify stand-alone firms. As an alternative, we compare KFTC-designated large business group firms against other set of firms that may include not only stand-alone firms, but also firms affiliated to smaller sized business groups. This alternative approach can be justified on the ground that key forces behind family premium is stronger in larger business group firms than in smaller group firms. First, the number and the size of member firms are greater within large business groups than within smaller groups. Recall that KFTC designates a business group as large if the aggregate asset size of its member firms, which is a function of number and size of member firms, is greater than 5 trillion Korean won. Second, the level of family cash flow rights in each individual member firm is lower in large business group firms than in smaller group firms. Table 2 shows that the average family cash flow right in large business group firms is 13% whereas that in other firms is 37%.

In column (1), we add the large group business (LBG) dummy to our base regression



in Table 3 column (4). Even when controlling for the LBG dummy, the coefficient on the family-executive dummy hardly changes. In column (2), we add an interaction term between the LBG dummy and the family-executive dummy. As expected, the interaction term is positive, economically large, and statistically significant at the 5% level (*Hypothesis 1b*). The coefficient value of 0.151 on the family-executive dummy and the coefficient of 0.232 on the interaction term suggest that family premium is 38.3% for large business group firms and 15.1% for other firms. In the remaining columns, we conduct a series of robustness checks. The results show that the interaction terms are either significant at the 5% level (columns (2), (3), (5), (7), and (8)), marginally significant at the 10% level (column (4)), or almost marginally significant (column (6)). The economic magnitude ranges from 17.9% to 31.8%. In column (8), we collapse the constant and the fitted values of other controls into a single composite index variable to save the regression's degrees of freedom.

The large business group dummy we use in Table 6, however, is a crude measure of business group size as it does not differentiate business groups within the KFTC-designated groups. In fact, our summary statistics in Table 2 reveal that group size ranges from 15.48 to 19.61. This corresponds to a range between 5.3 and 331 trillion Korean won. In Table 7, we conduct tests similar to those in Table 6, but limit our sample to firms affiliated to KFTC-designated large business groups and replace the large business group dummy with the group size variable. When measuring group size, we simply take the figure announced by KFTC. As noted earlier, KFTC measures the size of a business group by summing up the fair assets of its member firms. For non-financial firms, fair asset is equal to book asset value. But, for financial firms, KFTC deliberately uses book equity value in lieu of book

asset value as their high financial leverage would distort the rankings. Note that  $\ln(\text{Group Size})$  is demeaned, and therefore the coefficient on family-executive dummy captures the premium for a group with a mean group size value of 48.5 trillion Korean won.

The results in Table 7 reveal that business group size matters in explaining family premium. The interaction terms between group size and family-executive dummy is positive, economically large, and statistically significant at 1% level across all specifications (*Hypothesis 1b*). Again, in column (8), we collapse the constant and the fitted values of other controls into a single composite index variable to save the regression's degrees of freedom. Statistically insignificant coefficient of -0.026 (virtually 0) on  $\ln(\text{Group Size})$  and a significant coefficient of 0.136 on the interaction term in column (2) suggests that a 100 percentage change in group size (e.g., a change from Dongkuk Steel Group that ranks 22<sup>nd</sup> to LS Group that ranks 13<sup>th</sup>) leads to a 13.6 percentage change in the total pay of family-executives, but virtually no change in that of non-family executives.

Examples of family premium increasing with group size abound. Consider the case of SK Group (3<sup>rd</sup> largest with a fair asset value of 145 trillion Korean won) and Hyundai Department Store Group (20<sup>th</sup> largest with a fair asset value of 12 trillion Korean won). At SK (the holding company of SK Group), Tae-Won Chey, a family representative director with a title of Chairman received a pay of 8.7 billion Korean won, whereas Young-Tae Kim, a non-family representative director with a title of President & CEO received 1.1 billion Korean won during 2013. The family pay premium at SK is 691%. At Hyundai Home Shopping, Kyo-Sun Chung, a family representative director with a title of Vice Chairman, is paid 1.4 billion Korean won, whereas In-Kwon Kim, non-family representative director

with a title of President & CEO, is paid 1.3 billion Korean won during 2013. At Hyundai Department Store Group, the family pay premium is 7.7%.

Figure 2 is a scatter plot between total compensation and group size (not demeaned). Samples include pay-disclosing executives from family firms. The fitted lines are from regressions of  $\ln(\text{Total Pay})$  on a constant and  $\ln(\text{Group Size})$ . The solid line uses family executives, where the dashed line uses non-family executives. The fitted lines clearly show that there exist a family premium regardless of group size and that the premium increases with group size.

#### *E. The Importance of Other Family Influence*

One of the key differences between business group firms and stand-alone firms that lead to a family premium is the absence of family members who own shares, but do not manage. As discussed earlier, with their welfare heavily dependent upon the prosperity of the firm, they have a strong incentive to carry out their monitoring role and make sure that family-executives do not overpay themselves. In this subsection, we investigate if the presence of these outside family members makes a difference.

For each family executive, we capture the influence of outside family members by their aggregate ownership in the firm concerned minus the ownership held by the family executive in the same firm. Using the variable names in Table 1, it is defined as (Other Family Ownership II – Ownership). We regress  $\ln(\text{Total Pay})$  on this newly generated variable, named Outside Family Influence, and a set of control variables similar to those in our base regression (Table 3 column (4)). We include all the control variables that appear in

the base regression except for Cash Flow Rights and Wedge that are considerably correlated with the Outside Family Influence variable. In columns (1) – (5), we investigate the influence of outside family members on family-executives, and in columns (6) – (7), we examine their influence on non-family executives. We expect other family ownership or influence measures to matter for pays to family-executives, but not for pays to non-family executives. To save the regression's degrees of freedom, we collapse the constant and the fitted values of other controls into a single composite index variable. Coefficient standard errors are heteroscedasticity-consistent robust standard errors, clustered at the firm level. Influential observations are identified and dropped if Cook's distance is greater than  $4/N$ , where  $N$  is the number of observations.

Table 8 shows the results. In column (1), we include Ownership and Other Family Ownership separately. Consistent with our prediction, the coefficient on Other Family Ownership is negative (*Hypothesis 2a*). In column (2), we replace these variables with Outside Family Influence, which reports a coefficient that is negative and statistically significant at the 5% level. The coefficient of -0.25 suggests that a 1-standard deviation change in Outside Family Influence (0.2) leads to a 5 percent fall in Total Pay. In column (3), we add  $\ln(\text{Dividend Income} + 1)$  to see if there is any substitution effect between executive compensation and dividend income.<sup>16</sup> The coefficient is small and statistically insignificant. In column (4), we regress on Outside Family Influence Dummy, which takes a value of 1 if Outside Family Influence is positive and 0 otherwise. The coefficient is again

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<sup>16</sup> This is in contrast to the findings in Cheung, Stouraitis, and Wong (2005) and Urzúa (2009). They both show that the level of compensation relative to dividend income rises with the fall of CEO or family ownership.

negative and statistically significant at the 1% level. The coefficient of -0.127 suggests that at firms where other family members have ownership greater than that of family-executives, pay to family-executives is higher by 12.7%. In column (5), we add  $\ln(\text{Dividend Income} + 1)$  to Outside Family Influence Dummy, and find that it has no explanatory power, invalidating again the substitution effect between executive compensation and dividend income. In remaining columns, we report the result for non-family executives. As expected, variables capturing other family ownership or influence do not matter for non-family executives (*Hypothesis 2b*).

A good example of family pay discount in the presence of other family ownership is Hyundai Green Food of Hyundai Department Store Group. Ji-Sun Chung, a family representative director with a title of Co-CEO, is paid 607 million Korean won, whereas Heung-Yong Oh, a non-family representative director with the same title, is paid 887 million Korean won during 2013. Outside family members hold 17.23% of Hyundai Green Food shares. The Co-CEO's younger brother (Kyo-Sun Chung) and the father (Mong-Keun Chung), respectively owns 15.26% and 1.97% of Hyundai Green Food common shares.

#### *F. Group Chair Status and Other Determinants of Family Premium*

In this subsection, we investigate the determinants of family premium using large business group firms. We restrict the sample to large business groups. By doing so, we can investigate the influence of group-related variables, the information of which is available only for these firms. Our left-hand side variable is Family Premium, which is  $\ln(\text{Total Pay})$  of a family-executive minus its predicted value for non-family executives who are

otherwise identical with the family-executive. As discussed earlier, we obtain this predicted value by getting the fitted value of Equation (1) when the family-executive dummy is set to be zero.

Table 9 reports the results. In column (1), we regress Family Premium on Group Size, Dividend Income, Ownership, Other Family Ownership, Chair, and No. of Directorship. The detailed definitions of these variables appear in Table 1. Notice that Family Premium is positively associated with Chair, which takes a value of 1 if family-executive is a group chair and 0 otherwise. This is consistent with our prediction that group chairs have the highest rank among family members and because of this are less likely to be disciplined by other family members (*Hypothesis 3*). The coefficient of 0.196 suggests that group chairs have a Family Premium that is 19.6%p higher than that of other family-executives. Examples of pay premium for business group chairs abound. A good example is Chairman Mong-Koo Chung of Hyundai Motor Group. At Hyundai Motor Company, he received a pay of 5.6 billion Korean won, where as his son, Vice Chairman Eui-Sun Chung received a pay of 1.8 billion Korean won during 2013. At Hyundai Mobis, Chairman Mong-Koo Chung received a pay of 4.2 billion Korean won, whereas his son, Vice Chairman Eui-Sun Chung received a pay of 0.6 billion Korean won during 2013.

Table 9 also shows that Family Premium is associated positively with Group Size across all specifications (*Hypothesis 1b*). The coefficients are economically meaningful and statistically significant either at 1% or at 5% level. The coefficient of 0.12 in column (1) indicates that a 1-standard deviation increase (1.13) in Group Size leads to a 0.14 increase in Family Premium. This is 40% of Family Premium's mean value of 0.34. Table 9 also

shows that Family Premium is positively associated with the family-executive's dividend income from the firm. This is consistent with our finding in Table 8 that there is no substitution effect between compensation and dividend income for family executives. Group Dividend, on the other hand, is insignificant across all specifications.

Table 9 also shows that Family Premium is negatively associated with family ownership variables. This is consistent to our findings in Table 8. Columns (1), (2), and (3) respectively use Other Family Ownership II, Family Ownership II, and Cash Flow Rights II. The coefficients on these variables are negative, economically meaningful, and statistically significant either at 1% or at 5% level. A coefficient of -0.994 in column (1) suggests that a 1-standard deviation increase (0.11) in Other Family Ownership II leads to a 0.11 fall in Family Premium. This is 30% of Family Premium's mean value of 0.34.

Table 9 also reports that Family Premium is negatively associated with the number of directorship an executive holds within the group. If the executive receives pay from each of the firms he or she holds directorship, the average pay from each firm is likely to be small. This is what we find in Table 9. The coefficient of -0.23 suggests that a one standard deviation increase (0.57) in  $\ln(\text{No. of Directorship})$  leads to a 0.13 fall in Family Premium. This is 39% of Family Premium's mean value of 0.34.

#### *G. Pay Discount to Internally Hired Non-Family Executives*

In this subsection, we investigate if the existence of within-group labor market for non-family executives is responsible for the family pay premium in large business group (LBG) firms. According to the existing literature, internally hired executives are paid less than

externally hired executives (Deckop, 1988; Murphy and Zábajník, 2004; and Bidwell, 2011). If LBG firms hire their non-family executives internally, thanks to the internal executive labor market they form, and as a consequence pay them less, one would observe family pay premium in LBG firms not because family-executives are paid lavishly, but because non-family executives are paid meagerly.

To investigate this possibility, we first check if the fraction of internally-hired non-family executives – as opposed to externally-hired non-family executives – is higher in LBG firms than in others. To this end, we manually collect past career information of each non-family executive in our sample ( $n = 245$ ) from company business reports. If we find any past position in the same company he or she is currently an executive of or in the company affiliated to the company he or she is currently an executive of, we regard him or her as an internally-hired executive. Otherwise, he or she is regarded as an externally-hired executive. We find that 73.5 percent of non-family executives are internally-hired. If we limit to LBG firms, the fraction is 86.1 percent, which is 32.9% higher than the fraction for non-LBG firms (53.2 percent). This result indicates that LBG firms have a greater tendency of relying on group-wide internal executive labor market than non-LBG firms (*Hypothesis 4a*).

Second, we test if internally hired non-family executives are indeed paid less than those externally hired. Table 10 reports the results, where we regress executive compensation (total pay in case of columns (1), (3), and (4); salary in case of columns (2), (4), and (6)), in natural logarithm, on the Internally-Hired executive dummy (1 if a non-family executive is internally hired, and 0 otherwise) and on the same set of control



variables that appear in our base regression (Table 3 column (4)). To save degrees of freedom, however, we collapse the constant and the fitted values of other controls (including industry dummies) into a single composite index variable following Core, Holthausten, and Larker (1999). Columns (1) and (2) use the full sample of non-family executives. Columns (3) and (4) limit the sample to non-family executives in large business group (LBG) firms. Columns (5) and (6) limit the sample to non-family executives in other firms.

The 0.144 coefficient on the Internally-Hired executive dummy in column (1) indicates that internally hired non-family executives are paid 14.4 percent more than those externally hired, the result of which is contrary to our expectation (*Hypothesis 4b*). If we limit the sample to LBG firms (column (3)), the coefficient drops down to 0.080, but if we limit to the sample to non-LBG firms (column (5)), the coefficient jumps to 0.614. These results indicate that the existence of within-group labor market for non-family executives is not responsible for the family pay premium in large business group (LBG) firms.

In columns (2), (4), and (6), we focus on salary, the pay component of which exhibits the greatest family pay premium (see Table 5, Column (1)). The -0.146 coefficient on the Internally-Hired executive dummy in column (2) indicates that internally hired non-family executives are paid 14.6 percent less than those externally-hired, the result of which is consistent with our expectation. This result also suggests that the large family pay premium we observe for salary is partly driven by a large fraction of internally-hired non-family executives that are lowly paid in terms of salary. The subsample results in column (4) and (6) also show that internally-hired executives are paid less than those externally-hired in

LBG firms and in non-LBG firms. But, the discount is not pronounced in LBG firms, the result of which cannot explain the greater family pay premium in LBG firms.

In sum, we conclude that existence of within-group labor market for non-family executives is partly responsible for the family premium in case of salary, but not for total pay in general, and not for the greater premium in LBG firms.

## **6. Conclusion and Discussion**

In this paper, we challenge the existing literature and show that family-executives can be paid more than non-family executives in family-controlled firms if firms under investigation are a part of a large business group. Using 2014 compensation data of 564 executives in 368 family-controlled firms in Korea, we find evidence supporting our predictions. First, family executives are paid more than non-family executives (by 27% more, on average) and this family premium is pronounced in larger business group firms even after controlling for potential selection bias problems. Second, the drop in outside family influence is associated with the rise in pay to family executives. But, no such association exists with the pay to non-family executives. Third, within large business group firms, family premium is larger for business group chairs and in firms with low family cash flow rights. Lastly, we show that the existence of within-group labor market for non-family executives is not responsible for the family pay premium in large business group firms.

Our results suggest that family-executives in large business group firms are paid more than it is necessary and they are using executive compensation as means of expropriating

other minority shareholders. This calls for strengthening the current disclosure requirements in Korea. There are three areas of improvement. First, FSS should give more detailed guidelines on how companies disclose the criteria/methods of pay. At present, FSS gives full discretion to the companies, and as a result, very few companies disclose the details of their pay criteria and methods. Second, the *Capital Market and Financial Investment Service Act* or its presidential decree should be revised so that the minimum amount of total pay subject to disclosure is lowered down to 100 million Korean won, which is a level consistent with the U.S. threshold of 100 thousand U.S. dollars. This will prevent family-executives from cutting down their pay below the threshold to evade their disclosure requirement. Third, the *Capital Market and Financial Investment Service Act* should be revised so that non-registered executives also become subject to pay disclosure as long as they hold executive positions and are one of the highest paid executives (e.g. one among the top five highest paid executives). This will prevent family-executives from stepping down from the board to evade pay disclosure.

One conceivable extension of this research is investigating the various evasive behaviors family-executives exhibit to be exempt from the pay disclosure requirement. In this paper, we already discussed two possibilities. One is remaining as a director, but cutting down the pay below the threshold that exempts disclosure. Another is stepping down from the board. We also saw symptoms of such evasive behaviors. The distribution of total pay shows a relatively low density in the region just above the threshold. This suggests that some family-executives intentionally lower their pay to evade pay disclosure. Also, the fraction of deregistering family-executives out of a total of registered family-executives in

the previous year jumps sharply at the 2014 shareholders' meeting. This suggests the possibility that some family-directors do step down from the board to evade pay disclosure.

Another area of extension is investigating the performance of firms with family pay premium. Family premium could reflect the relative importance of family executives as well as the extent to which the family executives are able to extract rents. If it is the latter, one would expect to see firms with family pay premium to exhibit lower firm value or inferior accounting performances. But, one should be aware with the fact that family pay premium is an endogenous variable, and that this makes empirical design quite challenging. In particular, one needs to address the issue of reverse causality. More profitable firms may have the resources to overpay their family-executives, whereas less profitable firms may not. Also, more profitable family-controlled firms may rely less on non-family executives, whereas less profitable family-controlled firms in crisis may need to recruit non-family executives to rescue the firm.

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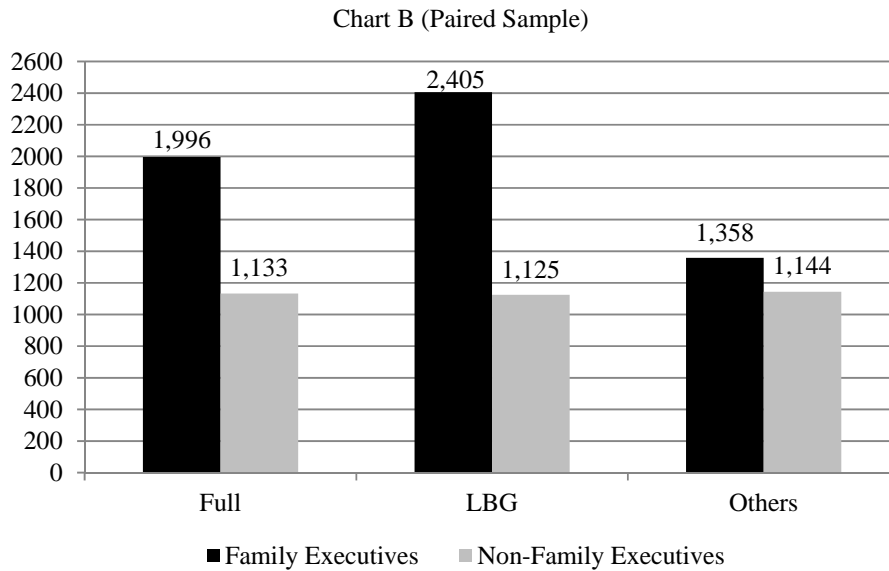
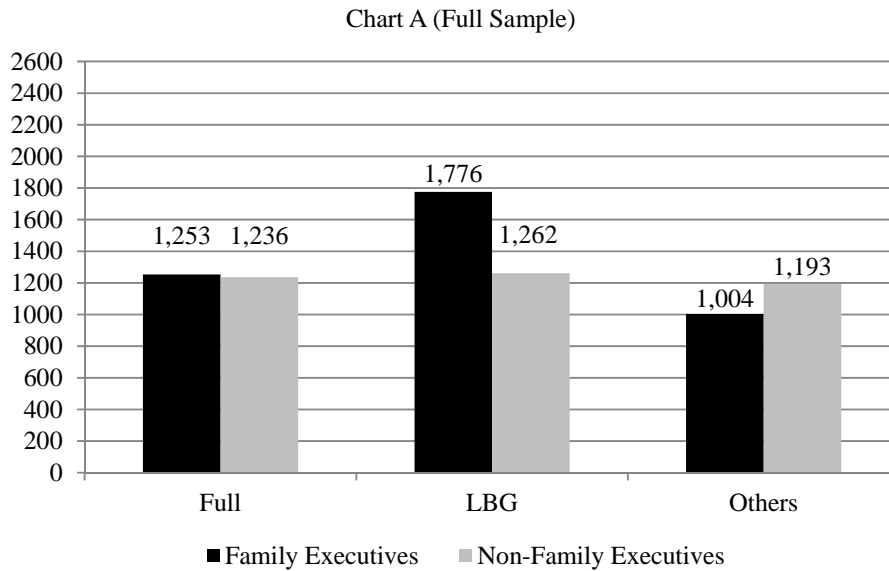
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**Figure 1: Family Executives vs. Non-Family Executives**

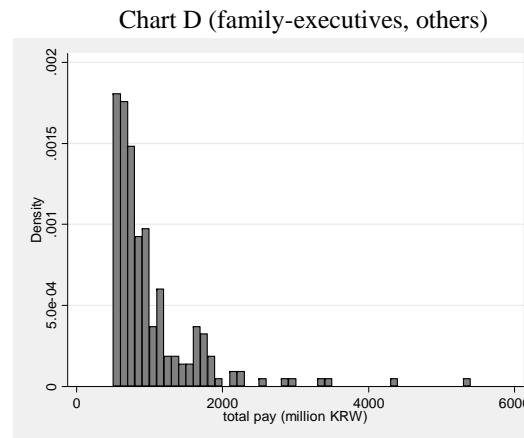
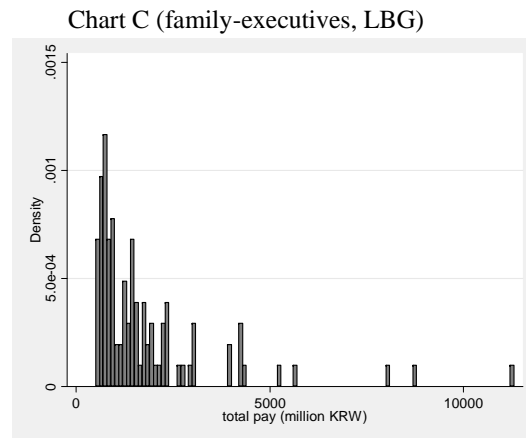
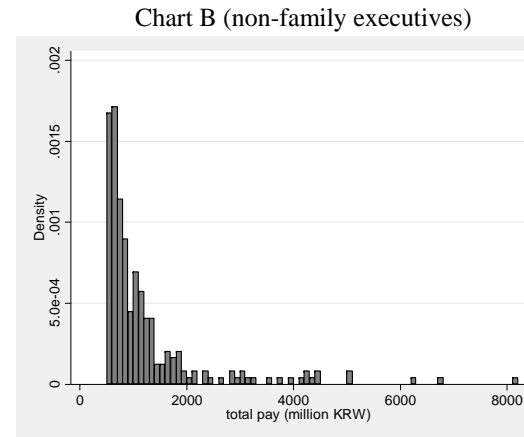
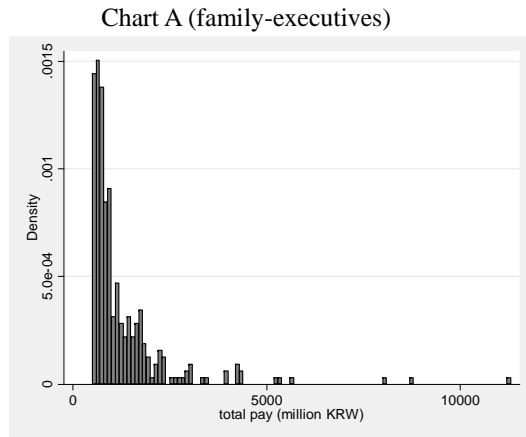
Bar charts of total compensation (in million Korean won, which is approximately 1 thousand U.S. dollars) of family and non-family executives in family-controlled firms. In Chart B, we restrict the sample to those that have at least one in each type of pay-disclosing executives (family executive and non-family executive). The first pair of bars in each chart includes the full sample of firms ( $n = 564$  in Chart A,  $n = 187$  in Chart B), the second pair limits to member firms of large business groups ( $n = 254$  in Chart A,  $n = 111$  in Chart B), designated by Korea Fair Trade Commission (KFTC), and the last includes all others ( $n = 310$  in Chart A,  $n = 76$  in Chart B).





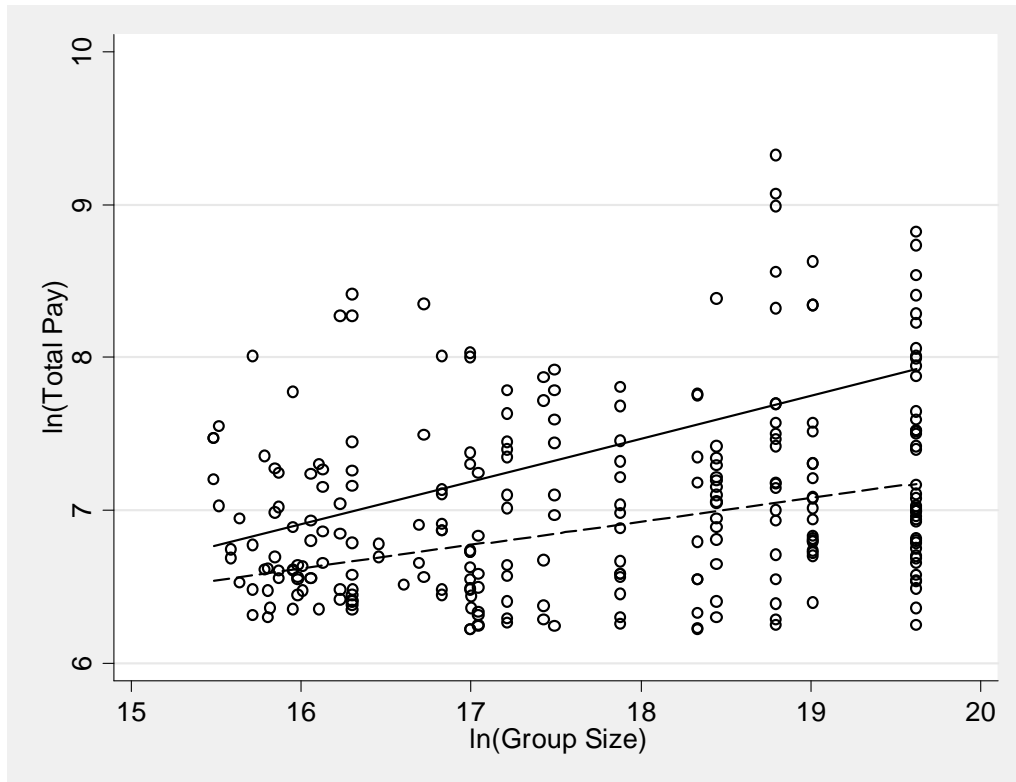
**Figure 2: Distribution of Executive Pay**

Histogram of total compensation (in million Korean won, which is approximately 1 thousand US dollars) for a subsample of family executives (Chart A), non-family executives (Chart B), family executives in large business group firms (Chart C), and family executives in other firms (Chart D).



**Figure 2: Group Size and Family Premium**

Scatter plot between total compensation (in million Korean won, which is approximately 1 thousand U.S. dollars; in natural logarithm) and group size (in trillion Korean won; in natural logarithm). Samples include pay-disclosing executives from family firms. The fitted lines are from regressions of  $\ln(\text{Total Pay})$  on a constant and  $\ln(\text{Group Size})$ . The solid line uses family executives, whereas the dashed line uses non-family executives.



**Table 1: Variable Definitions**

Panel A: Compensation-related Variables	
Variables	Definitions
Total Pay	Total compensation in million Korean won (approximately 1 thousand US dollars). <i>Source:</i> Business reports of each company retrieved from Data Analysis, Retrieval and Transfer System (DART) administered by Financial Supervisory Service (FSS). Individual components of total compensation also from the same source.
Salary	Salary (in million Korean won)
Bonus	Bonus (in million Korean won)
Incentive	Cash incentives (in million Korean)
Stock Option	Gains from stock option exercise (in million Korean)
Retirement	Retirement pay (in million Korean won)
Others	All other pay (in million Korean won)
Pay Multiples	Total compensation divided by employees' average wage, in natural logarithm
Panel B: Executive-level Variables	
Variables	Definitions
Family	1 if the executive is a family member, 0 otherwise. To be classified as a family member, he or she has to be a relative to the controlling shareholder (the degree of kinship must be six or less if blood relationship exists with the controlling shareholder and six or less if blood relationship exists with the controlling shareholder's spouse). <i>Sources:</i> Board member filings retrieved from Online Provision of Enterprises Information System (OPNI) administered by Korea Fair Trade Commission (KFTC) and business group and 5% block holding files retrieved from DART
Executive Age	Executive's age as of 2013. <i>Source:</i> Business reports from each company retrieved from Total Solution 2000 (TS2000) compiled by Korea Listed Companies Association (KLCA).
Representative Director	1 if the executive is a representative director, 0 otherwise. <i>Source:</i> Business reports of each company retrieved from DART.
Tenure	Number of years served as director in the firm. <i>Source:</i> Business reports of each company retrieved from DART.
Dismiss	1 if dismissed any time during 2013, 0 otherwise. <i>Source:</i> Business reports of each company retrieved from DART.
No. of Paying Firms	Number of firms, from which the executive received total compensation above 500 million Korean won (approximately 500 thousand US dollars). <i>Source:</i> Business reports of each company retrieved from DART.
Ownership	Fraction of common shares held by the executive at year-end 2013. <i>Source:</i> Business reports of each company retrieved from DART.
Other Family Ownership I	Family Ownership I – Ownership. Family Ownership I is defined in Panel C.
Other Family Ownership II	Family Ownership II – Ownership. Family Ownership II is defined in Panel C.

Outside Family Influence	Other Family Ownership II – Ownership
Outside Family Influence Dummy	1 if Outside Family Influence is positive and 0 otherwise.
Dividend Income	Cash dividend received (in million Korean won). <i>Source:</i> firm's total cash dividend retrieved from TS2000.
Chair	1 if chairman of the business group, 0 otherwise. Available only for large business group firms. <i>Source:</i> KFTC press releases
Group Dividend	Cash dividend received (in million Korean won) by the executive from firms within the business group. Available only for large business group firms. <i>Sources:</i> OPNI and DART
No. of Directorship	Number of member firms, at which the executive hold directorship. Available only for large business group firms. <i>Sources:</i> OPNI and TS2000

#### Panel C: Firm-level Variables

Variables	Definitions
Family Firm	1 if a firm is a family firm, 0 otherwise. <i>Sources:</i> OPNI and DART
LBG	1 if a firm is a member of a large business group, designated by KFTC either in April 2013 or in April 2014, 0 otherwise. <i>Source:</i> Korea Fair Trade Commission press releases
Firm Size	Total assets (in thousand Korean won). <i>Source:</i> TS2000
Firm Value	Tobin's Q measured by (market value of common equity + book value of preferred equity + book value of debt)/(book value of total assets).
Firm Age	Years since firm establishment. <i>Source:</i> TS2000
ROA	Net income divided by total assets at year-end 2013. <i>Source:</i> TS2000
ROA (1-yr lag)	Net income divided by total assets at year-end 2012. <i>Source:</i> TS2000
Stock Returns	Log return over 2013. <i>Source:</i> DataGuide, a financial database solution compiled by FnGuide, a Korea-based financial data/software company.
Systematic Risk	Standard deviation of KOSPI monthly returns over a 5-year period (2008-2013) multiplied by the firm's beta (estimated by a market model using KOSPI as market portfolio and using the same monthly returns over the same time period).
Unsystematic Risk	Standard deviation of residual returns from the above market model.
R&D/Sales	Research and development (R&D) expenditure divided by total sales. 0 for financial companies. <i>Source:</i> TS2000
Family Ownership I	Fraction of common shares held by family members at year-end 2013. <i>Source:</i> Business reports of each company retrieved from DART.
Family Ownership II	Fraction of common shares held by family members and non-family executives at year-end 2013. <i>Source:</i> Business reports of each company retrieved from DART.
Cash Flow Rights I	Family members' (excluding non-family executives') cash flow rights (in fraction terms) at year-end 2013. Available only for large business group firms. <i>Sources:</i> OPNI and DART
Cash Flow Rights II	Family members' (including non-family executives') cash flow rights (in fraction terms) at year-end 2013. <i>Sources:</i> OPNI and DART
Wedge II	Control rights (fraction of common shares held by family members, non-family executives, affiliated not-for-profit organizations, and member firms) at year-end 2013 minus Cash Flow Rights II at year-end 2013. <i>Sources:</i> TS2000

Wage	Employees' average wage (in million Korean won). <i>Source: DART</i>
Board Size	Number of directors at year-end 2013. <i>Sources: OPNI and TS2000</i>
Outside Director Ratio	Number of outside directors as a fraction of Board Size at year-end 2013. <i>Source: TS2000</i>
No. of Board Meetings	Number of board meetings in 2013. If multiple meetings held in a single day, they are treated as one meeting. <i>Source: DART</i>
Foreign Ownership	Common shares held by foreigners at 2013 year-end, in fractions. <i>Source: DataGuide</i>
Industry Fixed Effects	Constructed from 4-digit Korea Standard Industrial Classification (KSIC), equivalent to 2-digit US Standard Industrial Classification. <i>Source: Statistics Korea</i>

#### Panel D: Group-level Variables

Variables	Definitions
Group Size	Sum of member firms' fair assets (in billion Korea won). Fair assets equal to total assets in case of non-financial member firms and to book equity in case of financial member firms. <i>Source: Korea Fair Trade Commission press releases</i>

**Table 2: Summary Statistics**

**Panel A: Compensation-related Variables**

	Family Executives						Non-family Executives					
	<i>N</i>	Mean	Median	S.D.	Min.	Max.	<i>N</i>	Mean	Median	S.D.	Min.	Max.
Total Pay	319	1,253	874	1,158	500	11,204	245	1,236	841	1,094	502	8,179
Salary	319	891	698	709	0	5,600	245	487	426	321	0	1,788
Bonus	319	174	6	340	0	2,400	245	207	115	352	0	2,981
Incentive	319	137	0	721	0	8,800	245	146	0	413	0	3,444
Retirement	319	40	0	237	0	2,735	245	228	0	578	0	4,587
Stock Option	319	0	0	0	0	0	245	139	0	705	0	8,000
Others	319	11	0	95	0	1400	245	28	0	134	0	1,490
Pay Multiples	319	25	19	20	7	167	245	22	16	23	6	273

**Panel B: Executive-level Variables**

	Family Executives						Non-family Executives					
	<i>N</i>	Mean	Med.	S.D.	Min.	Max.	<i>N</i>	Mean	Median	S.D.	Min.	Max.
Executive Age	319	59.08	58.00	10.21	34.00	91.00	245	56.95	58.00	6.65	33.00	75.00
Representative Director	319	0.71	1.00	0.45	0.00	1.00	245	0.65	1.00	0.48	0.00	1.00
Tenure	319	10.91	12.00	4.88	1.00	26.00	245	5.54	4.00	3.88	0.00	16.00
Dismiss	319	0.10	0.00	0.30	0.00	1.00	245	0.35	0.00	0.48	0.00	1.00
No. of Paying Firms	319	1.38	1.00	0.72	1.00	4.00	245	1.00	1.00	0.00	1.00	1.00
Ownership	319	0.15	0.12	0.14	0.00	0.62	245	0.00	0.00	0.01	0.00	0.12
Other Family Ownership I	319	0.12	0.08	0.14	0.00	0.76	245	0.12	0.05	0.16	0.00	0.65
Other Family Ownership II	318	0.12	0.08	0.14	0.00	0.76	245	0.12	0.05	0.16	0.00	0.65
Dividend Income	319	927	124	2792	0	27,629	245	18	0	98	0	982
Chair	103	0.46	0	0.50	0	1	151	0	0	0	0	0
Group Dividend	100	6,328	2,513	10,813	0	54,559	129	5.39	0	19.56	0	188.99
No. of Directorship	103	4.57	4	3.28	0	13	150	1.65	1	1.69	0	11

**Panel C: Firm-level Variables**

	Large Business Group (LBG) Firms						Other Firms					
	<i>N</i>	Mean	Med.	S.D.	Min.	Max.	<i>N</i>	Mean	Median	S.D.	Min.	Max.

<i>ln</i> (Firm Size)	134	14.85	14.85	1.36	11.50	18.86	234	12.40	12.31	0.97	9.95	15.07
Firm Value	133	1.22	1.06	0.59	0.28	4.23	232	1.33	1.06	1.18	0.30	12.80
Firm Age	134	36.57	37.50	18.98	1.00	83.00	234	29.03	26.00	16.71	0.00	89.00
ROA	134	0.00	0.02	0.18	-1.51	0.71	234	0.04	0.04	0.22	-1.03	2.84
ROA (1-yr lag)	134	0.05	0.03	0.29	-0.35	3.36	233	0.05	0.04	0.07	-0.45	0.52
Stock Returns	133	-0.05	-0.02	0.33	-1.18	0.70	230	0.04	0.06	0.42	-2.45	1.20
Systematic Risk	133	0.05	0.05	0.03	0.00	0.13	230	0.04	0.04	0.02	0.00	0.13
Unsystematic Risk	133	0.10	0.09	0.03	0.05	0.22	230	0.12	0.12	0.04	0.03	0.26
R&D/Sales	134	0.01	0.00	0.02	0.00	0.16	234	0.02	0.00	0.05	0.00	0.35
Family Ownership I	134	0.11	0.03	0.15	0.00	0.76	234	0.29	0.28	0.19	0.00	0.80
Family Ownership II	134	0.11	0.03	0.15	0.00	0.76	234	0.29	0.28	0.19	0.00	0.80
Cash Flow Rights I	133	0.13	0.06	0.16	0.00	0.76	234	0.37	0.36	0.17	0.00	0.80
Cash Flow Rights II	133	0.14	0.07	0.16	0.00	0.76	226	0.37	0.36	0.17	0.00	0.80
Wedge	133	0.28	0.30	0.19	0.00	0.79	226	0.05	0.00	0.10	0.00	0.57
Wage	134	62.09	62.00	15.86	26.00	105.00	234	46.72	44.00	14.39	19.60	135.40
Board Size	134	7.96	8.00	2.24	3.00	14.00	234	5.56	5.00	2.12	2.00	12.00
Outside Director Ratio	134	0.50	0.56	0.14	0.00	0.75	231	0.30	0.29	0.14	0.00	0.67
No. of Board Meetings	134	13.09	10.00	9.04	3.00	70.00	234	13.07	11.00	9.77	1.00	82.00
Foreign Ownership	134	0.18	0.14	0.14	0.00	0.56	234	0.08	0.03	0.11	0.00	0.59

Panel D: Group-level Variables

	Group Size > Median (16.31)						Group Size < Median (16.31)					
	<i>N</i>	Mean	Med.	S.D.	Min.	Max.	<i>N</i>	Mean	Median	S.D.	Min.	Max.
<i>ln</i> (Group Size)	18	17.58	17.32	0.93	16.46	19.62	19	15.90	15.87	0.25	15.48	16.31

**Table 3: Family Premium in Total Pay**

In this table, we report regression results where we regress  $\ln(\text{Total Pay})$  on family-executive dummy and a set of executive- and firm-level control variables. In column (2), we add 2-digit industry fixed effects. In column (3), we replace 2-digit with 4-digit industry fixed effects. In column (4), we add a number of firm performance variables. Coefficient standard errors are heteroscedasticity-consistent robust standard errors, clustered at the firm level. We identify and drop influential observations for each regression if Cook's distance is greater than  $4/N$ , where  $N$  is the number of observations. \*\*\*, \*\*, and \* respectively indicate significance at 1%, 5%, and 10% levels.

	(1)	(2)	(3)	(4)
<b>Executive-level Variables</b>				
Family	0.2417*** (4.71)	0.2705*** (4.97)	0.2874*** (4.99)	0.2876*** (4.92)
$\ln(\text{Executive Age})$	0.1906 (1.37)	0.1166 (0.72)	0.2705* (1.68)	0.2717* (1.67)
Representative Director	0.1046** (2.55)	0.1079** (2.47)	0.1625*** (3.91)	0.1750*** (4.09)
$\ln(\text{Tenure} + 1)$	0.0839** (2.34)	0.0903** (2.18)	0.0652 (1.53)	0.0603 (1.39)
Dismiss	0.1715*** (3.12)	0.2040*** (3.59)	0.1960*** (3.22)	0.1685** (2.50)
No. of Paying Firms	0.0746* (1.74)	0.0389 (0.92)	0.0488 (1.14)	0.0508 (1.21)
<b>Firm-level Variables</b>				
$\ln(\text{Firm Size})$	0.1535*** (6.48)	0.1686*** (6.04)	0.1500*** (5.03)	0.1350*** (4.93)
Firm Value	0.0606*** (3.02)	0.0511** (2.48)	0.0609** (2.43)	0.0766*** (3.25)
$\ln(\text{Firm Age} + 1)$	-0.0501* (-1.74)	-0.0601* (-1.92)	-0.0297 (-0.88)	-0.0292 (-0.86)
R&D/Sales	1.2597*** (2.81)	1.7987*** (3.05)	1.8900*** (3.13)	1.8570*** (3.36)
Cash Flow Rights I	-0.3436** (-2.33)	-0.3961*** (-2.63)	-0.4969*** (-3.01)	-0.4481*** (-2.68)
Wedge	-0.5559*** (-3.41)	-0.5874*** (-3.58)	-0.6354*** (-3.90)	-0.5718*** (-3.54)
$\ln(\text{Wage})$	0.2635*** (3.66)	0.2857*** (3.35)	0.3132*** (2.84)	0.3066*** (2.96)
Outside Director Ratio	-0.0005 (-0.00)	-0.0542 (-0.34)	0.0234 (0.13)	0.0690 (0.39)
$\ln(\text{Board Size})$	-0.1209* (-1.95)	-0.1475** (-2.16)	-0.1255* (-1.92)	-0.1308** (-2.00)
$\ln(\text{No. of Board Meetings})$	0.0106 (0.34)	0.0247 (0.71)	0.0191 (0.53)	0.0219 (0.58)
Foreign Ownership	-0.1982 (-0.99)	-0.2078 (-0.96)	-0.1012 (-0.41)	-0.1281 (-0.51)
ROA	0.1602	0.2340	0.3450*	0.4096**



	(1.11)	(1.38)	(1.91)	(2.22)
ROA (1-yr lag)				0.0770
				(1.14)
Stock Return				-0.1424**
				(-2.10)
Systematic Risk				0.2043
				(0.17)
Unsystematic Risk				-0.4446
				(-0.67)
Constant	2.8822***	3.1747***	2.5438***	2.6847***
	(4.69)	(4.29)	(2.82)	(3.30)
Industry Fixed Effects	-	2-digit	4-digit	4-digit
No. of Observations	504	504	498	494
Adjusted R-squared	0.319	0.329	0.358	0.344

**Table 4: Family Premium in Total Pay – Robustness Check**

In this table, we report regression results where we conduct a series of robustness tests. As for column (7), we collapse the constant and the fitted values of other controls into a single composite index variable to save regression's degrees of freedom following Core, Holthausten, and Larker (1999). Coefficient standard errors are heteroscedasticity-consistent robust standard errors, clustered at the firm level. We identify and drop influential observations for each regression if Cook's distance is greater than  $4/N$ , where  $N$  is the number of observations. \*\*\*, \*\*, and \* respectively indicate significance at 1%, 5%, and 10% levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Limited to LBG Firms with group fixed effects	Exclude executives with extreme values	Exclude group chairman	Pay multiples	Exclude executives with retirement pay or option gains	Exclude executives with total pay < 700 mil. won	Limit to paired Sample
Family	0.7889*** (6.02)	0.2791*** (4.80)	0.2260*** (3.66)	0.2879*** (4.91)	0.4066*** (5.62)	0.2792*** (3.58)	0.5169*** (7.18)
Constant, other controls	Y	Y	Y	Y	Y	Y	Y
Industry Fixed Effects	4-digit	4-digit	4-digit	4-digit	4-digit	4-digit	4-digit
Composite Index							Y
No. of Observations	209	489	458	496	393	332	162
Adjusted R-squared	0.658	0.337	0.268	0.312	0.438	0.347	0.676

**Table 5: Family Premium in Different Types of Pay**

In this table, we report regression results where we regress different types of executive compensation, in natural logarithm, on the same set of control variables that appear in our base regression (Table 3 column (4)). Coefficient standard errors are heteroscedasticity-consistent robust standard errors, clustered at the firm level. We identify and drop influential observations for each regression if Cook's distance is greater than  $4/N$ , where  $N$  is the number of observations. \*\*\*, \*\*, and \* respectively indicate significance at 1%, 5%, and 10% levels.

	(1)	(2)	(3)	(4)	(5)	(6)
	Salary	Bonus	Incentive	Retirement	Options	Others
<b>Executive-level Variables</b>						
Family	0.654*** (7.98)	0.042 (0.14)	0.005 (0.02)	-0.645*** (-3.28)	-0.105* (-1.75)	-0.184 (-1.31)
<i>ln</i> (Executive Age)	0.467** (2.50)	-0.376 (-0.51)	-0.655 (-1.07)	-0.389 (-1.02)	-0.188* (-1.67)	-0.159 (-0.91)
Rep. Director	0.119** (2.39)	0.015 (0.06)	0.115 (0.63)	0.179 (1.31)	-0.006 (-0.22)	-0.048 (-0.90)
<i>ln</i> (Tenure + 1)	0.031 (0.62)	0.119 (0.50)	-0.070 (-0.31)	0.071 (0.50)	0.054 (1.58)	0.020 (0.34)
Dismiss	-0.417*** (-5.06)	-0.144 (-0.55)	-0.611** (-2.26)	3.656*** (11.17)	0.007 (0.14)	0.130 (1.09)
No. of Paying Firms	0.085 (1.51)	-0.408* (-1.82)	-0.339* (-1.93)	-0.109 (-0.73)	0.008 (0.60)	0.047 (0.85)
<b>Firm-level Variables</b>						
<i>ln</i> (Firm Size)	0.186*** (5.34)	0.300 (1.57)	-0.076 (-0.44)	-0.111 (-1.44)	-0.032 (-1.38)	-0.030 (-0.40)
Firm Value	0.084** (2.38)	0.273* (1.65)	-0.202 (-1.53)	-0.124** (-2.12)	0.004 (0.39)	0.023 (0.56)
<i>ln</i> (Firm Age + 1)	-0.067 (-1.58)	-0.359 (-1.63)	0.180 (0.82)	-0.158* (-1.67)	-0.003 (-0.26)	-0.037 (-0.62)
R&D/Sales	0.964 (1.38)	-12.926*** (-3.77)	-3.536 (-1.58)	-2.338 (-1.32)	-0.475* (-1.67)	0.220 (0.26)
Cash Flow Rights I	-0.095 (-0.46)	-0.116 (-0.09)	-2.527** (-2.16)	0.214 (0.36)	-0.150 (-1.14)	0.159 (0.52)
Wedge	-0.176 (-0.85)	0.996 (0.87)	-1.605 (-1.47)	-0.460 (-0.77)	0.082 (0.55)	0.101 (0.48)
<i>ln</i> (Wage)	0.067 (0.57)	1.781*** (3.20)	2.140*** (3.60)	-0.202 (-0.66)	0.022 (0.31)	0.134 (0.63)
Outside Dir. Ratio	-0.039 (-0.17)	-1.413 (-1.22)	0.648 (0.61)	0.568 (1.23)	0.116 (0.91)	0.406 (1.58)
<i>ln</i> (Board Size)	-0.096 (-0.98)	-0.272 (-0.56)	-0.018 (-0.04)	-0.250 (-1.02)	-0.039 (-1.16)	-0.099 (-0.84)
<i>ln</i> (No. of Meetings)	-0.065 (-1.14)	0.103 (0.41)	-0.336 (-1.58)	0.207* (1.85)	-0.008 (-0.80)	-0.015 (-0.29)
Foreign Ownership	-0.102 (-0.33)	-0.538 (-0.35)	-0.305 (-0.20)	0.586 (0.87)	0.061 (0.54)	0.100 (0.22)
ROA	-0.133	0.456	-0.145	0.145	-0.038	0.689**

	(-0.46)	(0.39)	(-0.36)	(0.48)	(-0.42)	(2.01)
ROA (1-yr lag)	-0.258***	1.385**	1.420***	0.098	-0.038	0.007
	(-5.08)	(1.98)	(3.82)	(0.96)	(-1.14)	(0.08)
Stock Return	-0.007	0.485	-0.302	0.339*	0.028	-0.095
	(-0.07)	(1.09)	(-0.91)	(1.80)	(0.91)	(-0.86)
Systematic Risk	0.637	-0.893	-7.160	-2.632	-0.921	1.948
	(0.43)	(-0.13)	(-1.09)	(-0.86)	(-1.43)	(1.08)
Unsystematic Risk	-0.696	-4.277	0.169	-1.018	0.075	0.371
	(-0.71)	(-0.85)	(0.04)	(-0.47)	(0.20)	(0.33)
Constant	1.614*	-5.587	2.906	4.937**	1.267*	0.104
	(1.92)	(-1.30)	(0.82)	(2.18)	(1.76)	(0.12)
Industry Fixed Effects	4-digit	4-digit	4-digit	4-digit	4-digit	4-digit
No. of Observations	508	508	505	500	513	499
Adjusted R-squared	0.518	0.312	0.249	0.564	0.829	0.036

**Table 6: Large Business Group Affiliation and Family Premium**

In this table, we report regression results where we interact the family-executive dummy with the large business group (LBG) dummy. We use the same set of control variables that appear in our base regression (Table 3 column (4)). Column (2) is the base regression. Column (1) omits the interaction term. Columns (3) to (8) conduct a series of robustness tests. As for column (8), we collapse the constant and the fitted values of other controls (including industry dummies) into a single composite index variable following Core, Holthausen, and Larker (1999) to save regression's degrees of freedom. Coefficient standard errors are heteroscedasticity-consistent robust standard errors, clustered at the firm level. We identify and drop influential observations for each regression if Cook's distance is greater than  $4/N$ , where  $N$  is the number of observations. \*\*\*, \*\*, and \* respectively indicate significance at 1%, 5%, and 10% levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	No Interactions	Base regression	Exclude executives with extreme values	Exclude group chairman	Pay multiples	Exclude executives with retirement pay or option gains	Exclude executives with total pay < 700 mil. won	Limit to paired sample
Family	0.288*** (4.91)	0.151** (2.22)	0.166*** (2.84)	0.128* (1.83)	0.151** (2.21)	0.306*** (3.68)	0.089 (0.99)	0.358*** (3.06)
x LBG		0.232** (2.30)	0.241** (2.46)	0.185* (1.69)	0.232** (2.30)	0.179 (1.50)	0.295** (2.38)	0.318** (2.25)
LBG	0.008 (0.11)	-0.157* (-1.74)	-0.139 (-1.62)	-0.106 (-1.20)	-0.157* (-1.74)	-0.145 (-1.31)	-0.321** (-2.41)	-0.400*** (-5.31)
Constant, other controls	Y	Y	Y	Y	Y	Y	Y	Y
Industry Fixed Effects	4-digit	4-digit	4-digit	4-digit	4-digit	4-digit	4-digit	4-digit
Composite Index								Y
No. of Observations	495	495	488	458	494	392	340	163
Adjusted R-squared	0.343	0.332	0.324	0.261	0.305	0.441	0.343	0.587

**Table 7: Size of Large Business Groups and Family Premium**

In this table, we report regression results where we limit the sample to large business group firms and replace the large business group dummy with the group size variable (demeaned at 48.5 trillion Korean won). Column (2) is the base regression. Column (1) omits the interaction term. Columns (3) to (8) conduct a series of robustness tests. To save degrees of freedom, we collapse the constant and the fitted values of other controls (including industry dummies) into a single composite index variable following Core, Holthausten, and Larker (1999). Coefficient standard errors are heteroscedasticity-consistent robust standard errors, clustered at the firm level. We identify and drop influential observations for each regression if Cook's distance is greater than  $4/N$ , where  $N$  is the number of observations. \*\*\*, \*\*, and \* respectively indicate significance at 1%, 5%, and 10% levels.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	No Interactions	Base regression	Exclude executives with extreme values	Exclude group chairman	Pay multiples	Exclude executives with retirement pay or option gains	Exclude executives with total pay < 700 mil. won	Limit to paired sample
Family	0.541*** (10.19)	0.643*** (12.07)	0.624*** (11.98)	0.743*** (13.43)	0.643*** (12.13)	0.701*** (16.09)	0.655*** (11.24)	0.871*** (13.71)
x $\ln(\text{Group Size})$		0.136*** (3.43)	0.109*** (2.81)	0.215*** (6.84)	0.136*** (3.34)	0.141*** (4.19)	0.115*** (3.07)	0.176*** (3.68)
$\ln(\text{Group Size})$	0.053*** (2.84)	-0.026 (-1.36)	0.018 (0.94)	0.103*** (6.59)	-0.026 (-1.40)	0.035* (1.74)	0.010 (0.59)	0.128*** (5.66)
Composite Index	Y	Y	Y	Y	Y	Y	Y	Y
No. of Observations	231	229	224	182	229	191	172	99
Adjusted R-squared	0.662	0.685	0.652	0.725	0.654	0.763	0.699	0.704

**Table 8: Importance of Other Family Ownership**

In this table, we report regression results where we regress  $\ln(\text{Total Pay})$  on ownership and dividend related variables, and a set of control variables similar to those in our base regression (Table 3 column (4)). We include all the control variables that appear in the base regression except for Cash Flow Rights I and Wedge. The sample is restricted to family-executives. To save degrees of freedom, we collapse the constant and the fitted values of other controls (including industry dummies) into a single composite index variable following Core, Holthausten, and Larker (1999). Coefficient standard errors are heteroscedasticity-consistent robust standard errors, clustered at the firm level. We identify and drop influential observations for each regression if Cook's distance is greater than  $4/N$ , where  $N$  is the number of observations. \*\*\*, \*\*, and \* respectively indicate significance at 1%, 5%, and 10% levels.

	Family-Executives					Non-Family Executives		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ownership	0.217 (1.33)					-0.248 (-0.14)		
Other Family Ownership I	-0.290 (-1.61)					-0.072 (-0.45)		
Outside Family Influence		-0.254** (-2.40)	-0.243** (-2.36)				-0.071 (-0.45)	
Outside Family Influence Dummy				-0.135*** (-2.84)	-0.133*** (-2.74)			0.030 (0.55)
$\ln(\text{Dividend Income} + 1)$			0.004 (0.50)		0.001 (0.19)			
Composite Index	Y	Y	Y	Y	Y	Y	Y	Y
No. of Observations	278	277	281	282	282	214	216	217
Adjusted R-squared	0.456	0.443	0.463	0.462	0.460	0.505	0.508	0.510

**Table 9: Determinants of Family Premium within Large Business Groups**

In this table, we report regression results where we regress family premium on a number of determinants. Family premium is  $\ln(\text{Total Pay})$  of family-executive minus its predicted value for non-family executives who are otherwise identical with the family-executive. The sample is restricted to large business group firms. Coefficient standard errors are heteroscedasticity-consistent robust standard errors, clustered at the firm level. We identify and drop influential observations for each regression if Cook's distance is greater than  $4/N$ , where  $N$  is the number of observations. \*\*\*, \*\*, and \* respectively indicate significance at 1%, 5%, and 10% levels.

	(1)	(2)	(3)
$\ln(\text{Group Size})$	0.124*** (3.28)	0.099*** (2.66)	0.091** (2.39)
$\ln(\text{Dividend Income} + 1)$	-0.016 (-1.14)	-0.018 (-1.38)	-0.017 (-1.21)
$\ln(\text{Group Dividend} + 1)$	0.050*** (4.35)	0.049*** (4.53)	0.044*** (3.92)
Ownership	-0.608* (-1.70)		
Other Family Ownership II	-0.994** (-2.16)		
Family Ownership II		-0.828*** (-2.82)	
Cash Flow Rights II			-0.717** (-2.46)
Chair	0.196** (2.40)	0.208** (2.57)	0.228*** (2.76)
$\ln(\text{No. of Directorship})$	-0.228*** (-2.66)	-0.197** (-2.33)	-0.200** (-2.35)
Constant	Y	Y	Y
No. of Observations	89	86	86
Adjusted R-squared	0.229	0.229	0.213



**Table 10: Pay Discount to Internally Hired Non-Family Executives**

In this table, we report regression results where we regress executive compensation (total pay in case of columns (1), (3), and (4); salary in case of columns (2), (4), and (6)), in natural logarithm, on the internally hired executive dummy (1 if a non-family executive is internally hired, and 0 otherwise) and on the same set of control variables that appear in our base regression (Table 3 column (4)). To save degrees of freedom, however, we collapse the constant and the fitted values of other controls (including industry dummies) into a single composite index variable following Core, Holthausten, and Larker (1999). Columns (1) and (2) use the full sample of non-family executives. Columns (3) and (4) limit the sample to non-family executives in large business group (LBG) firms. Columns (5) and (6) limit the sample to non-family executives in other firms. Coefficient standard errors are heteroscedasticity-consistent robust standard errors, clustered at the firm level. We identify and drop influential observations for each regression if Cook's distance is greater than  $4/N$ , where  $N$  is the number of observations. \*\*\*, \*\*, and \* respectively indicate significance at 1%, 5%, and 10% levels.

	Full Sample		LBG Firms		Non-LBG Firms	
	(1) Total Pay	(2) Salary	(3) Total Pay	(4) Salary	(5) Total Pay	(6) Salary
Internally Hired	0.144** (2.53)	-0.146** (-2.21)	0.080 (1.20)	-0.275*** (-4.68)	0.614*** (8.88)	-0.343*** (-8.42)
Constant	Y	Y	Y	Y	Y	Y
Industry-Effects	Y	Y	Y	Y	Y	Y
Composite Index	Y	Y	Y	Y	Y	Y
No. of Observations	209	213	137	138	65	65
Adjusted R-squared	0.592	0.681	0.772	0.673	0.713	0.934

## Appendix: Sample Disclosure of Executive Compensation in Korea

In this appendix, we show how Korean firms disclose their executive pay using an example of 2013 company business report of Samsung Electronics. Table A illustrates how total and average pays to different groups of executives are disclosed. Table B demonstrates how the upper limit of FY2013 aggregate compensation is disclosed. Table C displays how pays to individual directors are disclosed. Notice that former directors are also subject to the disclosure requirement. Table D shows how the criteria and the methods of individual pay are disclosed. Here, we use the pay to Mr. Oh-Hyun Kwon as an example. Since companies have full discretion over this last table, detailed disclosure items vary considerably from one company to another. Tables C and D are newly required disclosure tables since the 2013 company business reports.

**Table A: Disclosure of Total and Average Pays**

Unit: million Korean won			
	Number of Directors	Total Pay	Average Pay
Inside Directors	4	26,356	6,589
Outside Directors	2	179	89
Audit Committee Members	3	279	93
<b>Total</b>	<b>9</b>	<b>26,814</b>	

**Table B: Disclosure of Upper Limit**

Unit: million Korean won		
	Number of Directors	Upper Limit
Inside Directors	4	
Outside Directors	2	
Audit Committee Members	3	
<b>Total</b>	<b>9</b>	<b>38,000</b>

**Table C: Disclosure of Individual Pay**

Unit: million Korean won		
Name	Title	Total Pay
Kwon, Oh-Hyun	Representative Director	6,773
Yoon, Book-Keun	Representative Director	5,089
Shin, Jong-Kyun	Representative Director	6,213
Lee, Sang-Hoon	Director	3,734
Choi, Gee-Sung	Former Representative Director	3,970
Ju-Hwa Yoon	Former Director	577

**Table D: Disclosure of Individual Pay Criteria and Methods**

(Oh-Hyun Kwon, CEO of Samsung Electronics)

Unit: million Korean won

Breakdown	Item	Amount	Criteria/Methods
Labor Income	Salary	1,788	· Board of directors
	Bonus	2,034	· Seasonal (Seollal/Chuseok) bonuses (100% of monthly salary) · 2-time target incentive (0-400% of monthly salary) set by the CEO based on each business unit's target achievement · 1-time performance incentive (0-70% of yearly base compensation) set by the CEO based on companywide achievement of earnings target
Retirement Income		-	-
Other Income	Stock Option	-	-
	Others	2,951	· Special Bonus & Welfare
Total		6,773	