

# Perils of Limiting the Coverage of Mandatory Pay Disclosure: The Korean Experience<sup>\*</sup>

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by

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## Abstract

This study documents the danger of limiting the coverage of mandatory pay disclosure. Exploiting the 2013 rule change in Korea, we find that its restrictive coverage, confined to board members with total annual pay exceeding 500 million Korean won, led a large fraction of executives to evade disclosure through deregistration (i.e., stepping down from the board) or pay-cuts. We also find that such evasion is mostly carried out by family executives in firms with high executive-to-worker pay ratios. If the original pay level is close to the threshold, we find that family executives choose pay-cuts over deregistration, as their preferred means of evasion.

*JEL classification:* G32, G34, G38, J3, M48

*Keywords:* executive compensation, disclosure evasion, family executives, executive-to-worker pay ratio

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## **1. Introduction**

Executive compensation can play an important role in retaining managerial talent and in aligning the interests of managers with those of shareholders. However, this role cannot materialize without a well-designed disclosure regime, through which outside shareholders can closely monitor how executives are paid.

Government regulation on disclosure differs considerably across countries (OECD, 2017). For example, some countries mandate disclosure by law (e.g., Germany, U.K., U.S.), whereas others recommend it merely as a best practice (e.g., Finland, France, Singapore). Among the countries that mandate disclosure, some require the disclosure of compensation for each executive by name (e.g., Australia, Canada, Netherlands), whereas others do not (e.g., Czech Republic, Mexico, Norway). Among the countries that mandate individual-level disclosure, some limit this requirement to board members (e.g., Argentina, Chile), whereas others extend this requirement to senior executives who may not necessarily be board members (e.g., Italy, Switzerland). In some countries, board members are exempt from disclosure if they are paid below a certain threshold (e.g., Japan, Korea), whereas others do not give such an exemption (e.g., Austria, Sweden).

Such heterogeneity across countries gives rise to some interesting research questions. One line of research is investigating the merits of one disclosure regime over the other. For example, one can question the added value of requiring disclosure for each executive by name. Would not the disclosure of pay aggregated across executives serve the same purpose? Another line of research is investigating if certain types of disclosure regimes are more prone to disclosure

evasion.

This study focuses on this last research question. We ask if limiting the coverage of mandatory disclosure to board members or to executives paid above a certain threshold can lead to disclosure evasions. We have two evasive behaviors in mind. The first is *deregistration*, that is, a board member stepping down from the board (i.e., removing oneself from corporate registry) but retaining a non-registered executive position.<sup>1</sup> The second is *pay-cut*, that is, the deliberate lowering of a registered board member's pay below the minimum level that mandates pay disclosure.

When choosing compliance or evasion, executives compare their respective costs. For executives whose pay is excessively high or decoupled from performance, public disclosure has costs in the form of criticism from shareholders and the public media. Evasion is not without costs either. For instance, if executives step down from the board and take non-registered executive positions, they also forego the power and prestige that comes with board membership. Pay-cuts are also expensive, especially when the threshold requiring mandatory disclosure is significantly lower than the pay one receives. If the cost of evasion outweighs the cost of compliance, a better strategy may be to comply than to evade.

In this study, we focus on family executives whose cost of evasion can be very different from that of non-family executives. First, deregistration is less costly for family executives than for non-family executives. This is because their power does not solely come from official job titles, but from their family ties with the controlling shareholder. Second, pay-cuts are also less

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<sup>1</sup> Note that a regime that mandates the disclosure of highest paid executives (e.g., top 3 in the U.S., top 5 in Israel), regardless of board membership, is less prone to evasion through deregistration. This is because stepping down from the board but remaining as the top 3 or 5 highest paid executives does not exempt them from mandatory disclosure.

costly for founding family members who typically own a significant fraction of shares in the company. Not only do they receive pay in the form of salaries and bonuses, but also through dividends. Moreover, they can extract private benefits from the firms they control. Therefore, in this study, we hypothesize that family executives are more likely to evade disclosure than are non-family executives, under the premise that the cost of disclosure is high.

In this study, we investigate this possibility using Korean data. There are two reasons for this. First, we consider the regulatory change that occurred in Korea. In 2013, Korea introduced a new disclosure regime that requires publicly traded companies to disclose the compensation of each executive by name, but with limited coverage. The disclosure is only mandatory for registered board members whose yearly pay exceeds 500 million Korean won (approximately worth 500 thousand U.S. dollars) in the prior fiscal year.<sup>2</sup> The exemptions given to unregistered senior executives and board members paid below 500 million won, allows us to test whether deregistration or pay-cuts are used as means of evasion. Second, we benefit from the fact that Korean firms have a significant presence of family executives, who we hypothesize are more susceptible to disclosure evasion. In our sample, 41 percent of all executives are family executives.

We find several interesting results. First, we find that evasion is pervasive. Among the executives registered as board members and disclosed compensation in 2013, we find that 21.7 percent evaded disclosure through either deregistration (11.4 percent) or pay-cuts (10.3 percent) in 2014. Note that our definition of deregistration does not include genuine retirements. An

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<sup>2</sup> To be exact, the law also requires statutory auditors to disclose their pay. In Korea, firms with book asset values below 2 trillion won can choose between a statutory auditor and an audit committee. Firms with book asset value above 2 trillion won must adopt the audit committee system.

executive is considered to be deregistering only if he or she is leaving the board to become a non-registered executive in the same company.

Second, we find that family executives are more likely to evade mandatory disclosure than are non-family executives. Specifically, using a cross-sectional sample of evasions and retirements in 2014, we find that the probability of a family executive evading disclosure via deregistration or pay-cuts is higher than that of a non-family executive by 28.3 percentage points, on average. In other words, we find that the likelihood of evasion decreases with the cost of evasion, where the cost is captured by the absence of family ties to the firm's controlling shareholder. Furthermore, we find that the likelihood of a family executive's deregistration jumps exactly in the year it is expected. Specifically, we find that family executives are no more likely to deregister than non-family executives during 2009-2012; however, they become more likely to do so starting in 2013 (the year Korea introduced its new disclosure regime) and remain so in 2014.

Third, we find that the tendency of evasion by family executives strengthens as the pay gap between executives and average workers (Executive-to-Worker Pay Ratio) widens. In other words, we find that the likelihood of evasion increases with the cost of disclosure (or, the benefit of evasion), where this cost is captured by the pay gap between executives and average workers.

Fourth, we find that family executives tend to evade through pay-cuts than through deregistration, if the original level of pay is close to the threshold of 500 million won. In other words, we find that family executives, when evading mandatory disclosure, deliberately chose the least costly method.

This study makes several contributions to the literature. First, we look beyond the U.S. and investigate a disclosure regime in another country. As mentioned earlier, disclosure rules differ

considerably across countries. Despite such heterogeneity, the extant literature focuses mainly on the U.S. regime. One exception is a group of studies that examine the unusual circumstance in Brazil in 2009, when some firms explicitly refused to comply with a new regulation to disclose executive compensation details by filing a court injunction, alleging increased personal security costs (Barros et al., 2015; Costa et al., 2016).

Second, we investigate disclosure evasion, a topic that has not received much interest in the literature. To date, the literature on pay disclosure mostly focuses on self-serving disclosure or defective disclosure, that is, executives disclosing their pay, but in a self-serving manner or incompletely, when it is not possible for them to evade disclosure obligations entirely. For example, the literature documents the use of downward-biased stock option valuation methods (Murphy, 1996; Aboody, Barth, and Kasznik, 2006) or downward-biased peer-company performance measures (Lewellen, Park, and Ro, 1996; Porac, Wade, and Pollock, 1999; Faulkender and Yang, 2012) by executives to justify their pay levels. The literature also documents the incomplete compliance of U.S. executives with the new pay disclosure rules adopted in 2006 (Robinson, Xue, and Yu, 2011).

Third, but most importantly, we are the first to document that deregistration and pay-cuts can be used to evade mandatory pay disclosure and that family executives are more likely to utilize these methods. Barros et al. (2015) and Costa et al. (2016) document the use of court injunctions as a means of evasion. However, court injunctions are exceptional measures that can only be used once when new disclosure rules are introduced.

We believe our findings can be generalized to many other countries. First, a disclosure regime that limits mandatory disclosure only to registered board members is more common than a regime that does not (OECD, 2017). In addition, family-controlled firms, where evasion is

more likely to occur, are prevalent around the world. Therefore, it is possible that family executives in other countries might also be engaging in deliberate deregistration to evade mandatory compensation disclosure. Second, Korea is not alone in exempting executives from mandatory disclosure if they are paid below a certain threshold. Japan introduced its own mandatory disclosure rules in 2010; however, it exempts executives who are paid less than 100 million yen (approximately 100 thousand dollars). Therefore, evasion through pay-cuts is also possible in Japan.

Lastly, the Korean experience can benefit policymakers in other countries, who need to design a new disclosure regime for executive compensation. The lesson here is to not limit such mandatory disclosure to board members or executives paid above a certain threshold. It is also worth noting here that Korean policymakers learned from their own experience. In 2016, the National Assembly passed an amendment that mandates the top five highest paid executives, in addition to board members, to disclose their compensation by name. This new disclosure rule is scheduled to take effect from the 2018 semi-annual report. However, they did not lower the pay threshold for mandatory disclosure.

The remainder of this paper is organized as follows: Section 2 describes the executive compensation disclosure policy in Korea. Section 3 develops the hypotheses and Section 4 describes the data. Section 5 provides the results, and Section 6 concludes.

## **2. Executive Compensation Disclosure Policy in Korea**

Korea has long maintained an opaque disclosure rule on executive compensation.<sup>3</sup> Prior to 2013, it did not require companies to disclose compensation for each executive or director by name.<sup>4</sup> Instead, companies disclosed aggregate compensation figures for directors within the same group. These groups include: (i) directors (excluding outside directors and audit committee members), (ii) outside directors (excluding outside directors serving on the audit committee), and (iii) audit committee members (statutory auditor, in case the company does not have an audit committee).

Since the mid-2000s, academics and lawmakers began expressing concerns over the compensation packages of executives of chaebol group firms. They claimed that pay is set by the group chairman to ensure that the executives are loyal to him and not to other shareholders. They called for disclosure of executive pay at the individual director level, which led to the submission of bills mandating this in 2006 and in 2009. However, both attempts failed at the National Assembly due to resistance from chaebols.

Continued pressure for better disclosure paid off on April 9, 2013, when the National Assembly finally passed a bill amending the Financial Investment Services and Capital Markets Act. It mandates any director (or statutory auditor) whose total pay in a given fiscal year exceeds a certain threshold (delegated to the Presidential Decree) to disclose his or her individual pay and the criteria/methods used to determine the pay level in the company's business reports (including quarterly, semi-annual, and annual reports). Later, on August 27, 2013, the Cabinet Meeting passed the Presidential Decree, which set the threshold for individual director-level disclosure at 500 million won (approximately 500 thousand U.S. dollars). The new rule took effect on

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<sup>3</sup> For more details on the rules and the practices of executive compensation disclosure in Korea, see Cheong and Kim (2014).

<sup>4</sup> Disclosure of stock option grants is an exception. Since the introduction of stock options, companies were required to disclose the details of the grant for each recipient by name.



November 29, 2013 (six months after the promulgated date of May 28, 2013)

According to the detailed disclosure guidelines set by the financial authorities, total pay is the sum of labor income (salary, bonus, and incentives), retirement income, and other income (including realized gains from stock option exercises) received during a given fiscal year. The guideline also made it clear that the directors (or statutory auditors) that step down from their positions mid-year are still subject to disclosure, as long as the total pay they received in a given fiscal year exceeds the 500 million won threshold.

The first set of firms subject to the new rule were those that disclosed their third quarter report after November 29 (the effective date of the new rule). However, such firms were few. Most firms disclosed individual pay for the first time at the end of March 2014 (the date 2013 business report was due). These firms have fiscal years ending in December, which make up 97% of KRX firms, and constitute the sample in this study.

It is worth noting here that the exodus from registered board positions for fear of compensation disclosure may not have taken place fully in 2013 but spread out over 2014. There are two reasons for this. First, the National Assembly passed the amendment in early April, which comes after the proxy season that ended in March. To step down in 2013, executives had no choice but to do it off-season, which may have drawn public attention and triggered suspicion that they were trying to evade compensation disclosure by deregistration. Second, even if executives stepped down mid-year in 2013, they would still have to disclose the pay they received in 2013. So long as the amount received from January 1 to the date of deregistration in 2013 exceeds 500 million won, they had to disclose it in the annual business report published in

March 2014.<sup>5</sup> This disclosure rule may have discouraged some executives from stepping down immediately after the law's passage in April. Thus, we conjecture that deregistration to avoid compensation disclosure must have taken place not only in 2013, but also in 2014, especially during its proxy season in March.

Similar to deregistration, we are open to the possibility that pay-cuts may have taken place in 2014 as well as in 2013. This is because the threshold of 500 million won was known only in August, leaving only four months for the executives to make adjustments to their 2013 pay. Those executives that failed to cut pay in 2013 must have done so in 2014. However, in our study, we can investigate only the 2014 pay-cuts. This is because we have no pay data for individual directors in 2012 to compare against pay in 2013.

### **3. Hypotheses Development**

We test four hypotheses in this study. First, we investigate if executives evade the disclosure of their 2014 pay, in reaction to the new disclosure rules adopted in 2013. Evasion is possible due to two loopholes in the new disclosure rules. The disclosure requirement of individual pay is confined only to board members. Senior executives, who do not sit on the board, are exempt from the new rule, regardless of their pay. The disclosure requirement of individual pay is also confined to those whose total annual pay is above 500 million won. Therefore, we conjecture that a large fraction of executives evaded disclosing their 2014 pay either by stepping down from the board and taking non-registered executive positions (i.e., deregistration) or by reducing pay

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<sup>5</sup> If the amount received exceeds the threshold between July 1 and September 30, pay had to be disclosed in the third quarter report, in addition to the annual report. If the amount received exceeds the threshold before June 30, pay had to be disclosed in the semi-annual and the third quarter reports, in addition to the annual report.

below the threshold (i.e., pay-cuts).

Second, we test the hypothesis that family executives are more likely to evade mandatory disclosure than non-family executives. When choosing between compliance and evasion, executives would compare the costs of either choice. For executives whose pay is excessively high or decoupled from performance, the cost of public disclosure is in the form of criticism from shareholders and the public media. Evasion is not without costs either. For instance, if executives step down and take non-registered executive positions, they also forego the power and the prestige that comes with board membership. Pay-cuts are also expensive, especially when the threshold for mandatory disclosure is significantly lower than the pay one receives. If the cost of evasion outweighs the cost of compliance, a better strategy may be to comply than to evade.

However, family executives may behave differently, as their cost of evasion can be very different from that of non-family executives. First, deregistration is less costly for family executives than for non-family executives. This is because their power does not solely result from official job titles, but through their family ties with the controlling shareholder. Second, pay-cuts are also less costly for founding family members who typically own a significant fraction of shares in the company. They not only receive pay in the form of salaries and bonuses, but also through dividends. Moreover, they can extract private benefits from the firms they control. Therefore, we hypothesize that family executives are more likely to evade disclosure than are non-family executives, under the premise that the cost of disclosure is high.

Third, we test the hypothesis that the tendency of evasion by family executives strengthens as the pay gap between executives and average workers (Executive-to-Worker Pay Ratio) widens. In other words, we examine if the likelihood of evasion increases with the cost of disclosure (or, the benefit of evasion), when the cost is captured by the pay gap between executives and average

workers. If executives worry that a wide pay gap may trigger management-labor disputes, they may choose to evade disclosure. Note that the Korean business sector opposed the introduction of individual-level pay disclosure system, as it feared triggering management-labor conflicts (Kim, 2013). Furthermore, this hypothesis is closely related to the findings of existing studies, which show that incomplete compliance or evasion are positively associated with the level of pay (Robinson, Xue, and Yu, 2011; Costa et al., 2016) or media attention (Robinson, Xue, and Yu, 2011).

Fourth, we hypothesize that family executives would evade disclosure through pay-cuts rather than deregistration if the original level of pay is close to the threshold of 500 million won. In other words, we examine if family executives, when evading mandatory disclosure, deliberately choose the least costly method. The cost of lowering compensation, say from 550 million to 499 million won, is substantially lower than the cost of stepping down from the board.

## **4. Data**

### *4.1 Definition of Variables*

Table 1 gives the definitions of each variable we use in this study and provides their data sources. The first set of variables is compensation-related, from the Economic Reform Research Institute (ERRI), which manually collects data from each company's business report.<sup>6</sup> First, Executive Pay is defined as the total annual pay (in hundred million won) that an executive receives in 2013. The total annual pay mainly includes salary, bonus, cash incentives, gains from stock

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<sup>6</sup> Business reports can be electronically retrieved from the Data Analysis, Retrieval, and Transfer System (DART), administered by the Financial Supervisory Service (FSS).

option exercises, and retirement pay. As retirement pay is sporadic in nature, we define an alternative variable in its absence: Executive Pay (w/o retirement). This variable equals Executive Pay – retirement pay. If the value of this variable falls below the threshold of 500 million won, we consider this variable to be missing.

We also have two compensation-related indicator variables: KRW 500-600 M and KRW 500-600 M (w/o retirement). KRW 500-600 M takes a value of 1 if Executive Pay is between 500 and 600 million won, and 0 otherwise. KRW 500-600 M (w/o retirement) is defined in the same manner, using Executive Pay (w/o retirement) instead of Executive Pay. Lastly, we have variables related to worker's pay, retrieved from Total Solution 2000 (TS2000), a database compiled by the Korea Listed Companies Association (KLCA). Worker Pay is defined as the average wage of company employees (in million won) in 2013. Executive-to-Worker Pay Ratio is defined as Executive Pay (w/o retirement) divided by Worker Pay in 2013, demeaned by industry averages.

The next set of variables are executive-level variables. Family Executive is an indicator variable that takes a value of 1 if an executive is the member of a controlling family, and 0 otherwise. We obtain this variable from the data set used in Cheong and Kim (2014), who identify affiliation to controlling family using two data sources. As for member firms of large business groups, designated as such by the Korea Fair Trade Commission (KFTC), they use board member filings, which can be retrieved from the Online Provision of Enterprises Information System (OPNI), administered by the KFTC. These filings give information on each board member's affiliation to the group's controlling family. As for firms outside these KFTC-designated large business group firms, they identify family affiliation by going through company business reports and 5% block holder filings. We refer to Cheong and Kim (2014), for details on

how this is done.

We have two variables that capture disclosure evasion. First, Pay Cut is an indicator variable that takes a value of 1 if an executive is registered as a director in both 2013 and 2014, is mandated to disclose compensation in 2013, but not in 2014; and 0 otherwise. Note that disclosure becomes mandatory when Executive Pay is greater than 500 million won. However, pay drops can occur even without the intention to evade. If performance pay takes up a large fraction of pay, a firm's poor performance can cause the pay to drop below the 500 million threshold level and exempt the executive from mandatory disclosure. To rule out such possibility, we control for firm performance in all our regressions.

Evasion is a variable that captures both types of evasion strategies: deregistration and pay-cuts. It is an indicator variable that takes a value of 1 if an executive is mandated to disclose compensation in 2013, but not in 2014, and who also meets one of the following three conditions: (i) registered as a director in both 2013 and 2014 (i.e., Pay Cut), (ii) listed as a non-registered executive in 2014 (i.e., deregistration), (iii) not registered as a director, nor listed as a non-registered executive in 2014, but no record of retirement pay in 2013 (i.e., *de facto* deregistration); 0 otherwise. Note that companies are not obligated to disclose the names of their non-registered executives in their business reports, which is why we add *de facto* de-registrations. We do this under the premise that if an executive steps down, but does not receive retirement pay, it is highly likely to be someone that assumes a non-registered executive position in the same company.<sup>7</sup>

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<sup>7</sup> One problem with this approach is ignoring the executives who receive part of their retirement pay before actual retirement. If such executives exist, we run the risk of misclassifying them as true retirements, even if they are evading disclosure by deregistration. However, this bias is innocuous in a sense that it works against us from finding evidence of evasion. In unreported analysis (available upon request), we also find that the key result of this study

Also note that an executive can receive pay as a registered director during the first few months of FY2013, convert into a non-registered executive at some point of time in FY2013, and stay as such during the remaining months of FY2013 and during the full months of FY2014 (i.e., early deregistration). We classify these early movers as executives evading pay disclosure by deregistration, along with those that convert into non-registered executives in the beginning of FY2014. Likewise, an executive can receive pay as a registered director during the first few months of FY2013 and retire at some point of time in FY2013 (i.e., early retirement). So long as there is a record of retirement pay in FY2013, we classify them as retiring executives, along with those that retire in the beginning of FY2014. Figure 1 depicts major events concerning executive pay disclosure and the periods three types of evasion took place on a time line.

Other executive-level variables include Representative Director, Executive Age, and Executive Ownership, which we use as controls in explaining disclosure evasion. Representative Director is an indicator variable that takes a value of 1 if an executive is a representative director of the firm in 2013, and 0 otherwise.<sup>8</sup> Given the importance of this position, we predict that an executive with this title would be less likely to step down to evade disclosure. For the same reason, we predict that representative directors would choose pay-cuts over deregistration. Executive Age is the executive's age as of 2013. We conjecture that the chances of retiring, as opposed to disclosure evasion, would increase with age. Executive Ownership is defined as the fraction of common shares (in percentage terms) owned by an executive in 2013. To the extent

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strengthens if we treat *de facto* deregistration as retirement, that is, the coefficient on Family Executive in Table 4 Column (4) increasing from 0.283 (t-value of 3.383) to 0.380 (t-value of 4.474).

<sup>8</sup> The "representative director" is a legal institution unique in Korea and some Asian countries, which is equivalent to a chief executive officer (CEO). They are resident executives who sit on the board and represent the company. However, for large firms, it is common to find multiple representative directors in a single company.

that dividend income from Executive Ownership can compensate pay-cuts, we expect that the tendency of executives to choose pay-cuts over deregistration would increase with Executive Ownership.

Next, industry or firm-level control variables include Proprietary Information, Large Business Group dummy, Industry-adjusted ROA, Firm Size, Firm Age, Foreign Ownership, Inside Ownership, Board Size, and Outside Director Ratio. Proprietary Information is a multi-dimensional measure that sums up four binary variables based on the Herfindahl index, product differentiation, market size, and industry entry cost. Table 1 gives the exact definition of this variable. We expect that executives in industries with high proprietary information will be more likely to evade compensation disclosure (Robinson, Xue, and Yu, 2011). The Large Business Group dummy is a binary variable taking a value of 1 if the firm is a member of a large business group (> 5 trillion won), as designated by the Korea Fair Trade Commission (KFTC) in FY2013. If executives in large business group firms are more likely to hold positions in multiple firms and collect pay from them separately, we predict that they will be more likely to evade disclosure by pay-cuts than by deregistration. Industry-adjusted ROA is return on assets minus industry average ROA in FY2013, where the industry is classified using two-digit KSIC in FY2013. We control for this to rule out deregistration or pay-cuts that have nothing to do with evasion. If the board has a strong tendency of removing poorly performing executives, but allowing them to remain in the company as non-registered executives, more deregistration will be apparent in firms with low profitability than in others, even if the executives had no intention of evading disclosure. Similarly, if performance-based pay takes up a large fraction of executive compensation, low profitability can lead to a fall in pay below the 500 million won threshold, even if the executive did not intend to evade disclosure. Firm size is defined as sales in thousand



KRW as of FY2013. Firm age is the number of years since the firm's establishment, as of FY2013. If large and mature firms are more likely to offer non-registered executive positions, we predict that the executives in these firms are more likely to deregister and hold such positions.

Lastly, we control for several ownership–and governance-related variables. Foreign Ownership is the fraction of common shares (in percentage term) owned by foreigners in FY2013. If foreign institutions play an effective monitoring role, we expect that executives in firms with high foreign ownership will be less evasive. Inside Ownership is the fraction of common shares (in percentage term) owned by the controlling shareholder and the related-parties (relatives, company board members, and affiliated firms) in FY2013. We expect that executives in firms that are tightly controlled by the founding family will evade more through deregistration. Board size is the number of directors on the board in FY2013. Outside Director Ratio is the number of outside directors divided by board size in FY2013. We expect that executives in firms with better governance (smaller board size and higher outside director ratio) will be less evasive.

#### *4.2 Descriptive Statistics*

Table 2 reports the summary statistics of variables used in this study. Panel A uses a sample in which executives disclose their compensation in 2013, but not in 2014 (the “evasion plus retirement” sample), whereas Panel B uses a sample that excludes retiring executives from the sample in Panel A (the “evasion” sample).

Two points are notable from the summary statistics. First, we have a comparable number of family and non-family executives in our sample; that is, 80 family executives and 115 non-family executives in the evasion plus retirement sample. Second, non-family executives come from larger firms than those of family-executives. The difference in sales volume is statistically

significant at the 5 percent level.

This concentration of non-family executives in larger firms (or the scarcity of non-family executives in smaller firms) has to do with the fact that non-family executives are usually paid less than the 500 million won threshold in smaller firms and, as a result, truncated from the sample of smaller firms. Cheong and Kim (2014) attribute this to two factors: (i) executives are generally paid less in smaller firms; and (ii) non-family executives are generally paid less than family executives (family pay premium). This difference in firm size between the family and non-family executive subsamples can also explain the differences between the two subsamples in terms of Worker Pay, Proprietary Information, Large Business Group, Foreign Ownership, and Outside Director Ratio. In our regression analyses, we always control for these observable differences.

To investigate the extent to which family and non-family executives come from different firms, we break down our sample into three groups: (i) executives from firms where family executives are the only type of executive that evades or retires (unpaired family executive sample); (ii) executives from firms where non-family executives are the only type of executive that evades or retires (unpaired non-family executive sample); (iii) executives from firms where both types of executives evade or retire (paired sample). The unpaired family-executive sample has 69 executives from 66 firms, the unpaired non-family executive sample has 104 executives from 86 firms, and the paired sample has 22 executives from 10 firms.

To alleviate any concerns that this mismatch in firm characteristics may lead to a sample selection bias, we conduct a paired sample test that limits the sample to firms where at least one family executive and at least one non-family executive are either evading disclosure or retiring.

## 5. Results

### 5.1 *Is Evasion Pervasive?*

First, we check if executives evade the disclosure of their 2014 pay, in reaction to the new disclosure rules adopted in 2013. Table 3 shows these results, where we divide executives that disclose pay in 2013 into those that engage in pay-cuts, deregistration, *de facto* deregistration, retirements, and others in 2014. Through a simple calculation, we see that evasion is pervasive. Among the executives registered as board members and disclosing compensation in 2013, we find that 21.7 percent evade disclosure either through deregistration ( $11.4 \text{ percent} = (38 + 28) / 580$ ) or pay-cuts ( $10.3 \text{ percent} = 60 / 580$ ) in 2014.

We list here specific examples for better understanding. Dam Chul-Gon (CEO & Chairman) of Orion is a good example of deregistration. He disclosed a total annual pay of 5.4 billion won in 2013 but stepped down from the board of Orion and listed himself as a non-registered executive in 2014. Note that Chair Dam is the son-in-law of Orion Group's founder and controls the group with his wife, Lee Hwa-Kyung (Vice Chairman). His pay of 5.4 billion won in 2013 is 154 times higher than that of Orion's average workers. Similarly, Kim Sang-Beom (CEO & Chairman) of Isu Petasys disclosed a total annual pay of 2.1 billion won in 2013 but gave up his board membership to become a non-registered executive of Isu Petasys in 2014. Note that Mr. Kim is the Chairman of Isu Group and the son of group's founder. His pay of 2.1 billion won in 2013 is 38 times higher than that of company's average workers.

Kwon Ki-Beom (CEO & Vice Chairman) of Dongkook Pharmaceutical is a good example of pay cuts. Vice Chairman Kwon, who disclosed a total annual pay of 504 million won in 2013,

exempt himself from disclosure in 2014 by cutting down his pay below the 500 million won threshold, while retaining his board membership. Similarly, Kim Jung-Min (CEO & Chairman) of Zero Two Seven disclosed a total annual pay of 505 million won in 2013 but exempt himself from disclosure in 2014 by reducing his pay below the threshold, while retaining his board membership. Interestingly, Chairman Kim became a registered director of Mael Dairies (mother company of Zero Two Seven) in that same year. His pay at Mael Dairies is also below the 500 million won threshold in 2014. Note that Vice Chairman Kwon of Dongkook Pharmaceutical and CEO Kim of Zero Two Seven are both the sons of group founders.

## *5.2 Family vs. Non-Family Executives*

Next, we test the hypothesis that family executives are more likely to evade mandatory disclosure than are non-family executives. One way is to compute the fraction of executives that are highly suspicious of evasion, out of a sample of executives that stop disclosing their pay in 2014, that is, evasion versus retirements. Table 2 Panel A shows the univariate result. Out of a sample of evasion plus retirements, the fraction of evasion is 85 percent for family executives and 50 percent for non-family executives. The difference-in-mean test shows that the difference is statistically significant at the 1 percent level.

Table 4 reports the multivariate results. Using probit or linear probability model (LPM) regressions, we predict the likelihood of evasion from mandatory pay disclosure using an executive's affiliation to the controlling family (i.e., Family Executive) and others. The sample consists of executives who disclose their pay in 2013, but not in 2014 (the "evasion plus retirement" sample). The coefficients are average marginal effects on probability in probit regressions (Column (1)-(4)). Z-statistics (t-statistics in case of Column (5)) use

heteroscedasticity-consistent standard errors. Columns (1) – (4) vary in the number of control variables we use.

The coefficients on Family Executive in Columns (1)-(4) are positive and statistically significant at the 1 percent level across all specifications. The coefficient of 0.283 in Column (4) suggests that family executives are more likely to evade disclosure than are non-family executives by 28.3 percent, on average. This is consistent with our hypotheses that family executives are subject to less evasion costs than non-family executives.

In Column (5), we estimate a linear probability model (LPM) using a sample of firms where at least one family executive and at least one non-family executive are either evading or retiring (paired sample test). As mentioned earlier, we do this to prevent sample bias, as family executives and non-family executives work at very different firms (e.g., firm size). The result reconfirms our finding that family executives are more likely to evade disclosure than non-family executives. The coefficient of 0.531 is almost double the coefficient we obtain when including unpaired samples. The *t*-statistics are relatively lower; however, this is because we are using a substantially smaller sample (from 195 to 22).<sup>9</sup>

Among our control variables, Executive Age is highly significant with a negative coefficient. This confirms our earlier conjecture that the chances of retiring, as opposed to evading through registration or pay-cuts, increases with age. However, Proprietary Information is insignificant across all specifications. This is consistent with the result in Robinson, Xue, and Yu (2011), who also fail to find evidence that firms with proprietary information engage more in defective disclosures.

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<sup>9</sup> Note that this small sample size led us to use LPM in lieu of probit, which failed to converge.

### 5.3 Family vs. Non-Family Executives (*Falsification Test and Difference-in-Differences*)

However, the results in Table 4 can be explained by an alternative hypothesis. If family executives, owing to their ties with the controlling shareholder, are less likely to be fired or retire of old age than non-family executives, the likelihood of their evasion over retirement would be spuriously high. In other words, the regressions in Table 4 might be capturing the family executive's lower retirement tendency rather than their higher evasion likelihood. In fact, Table 3 shows that the fraction of retirement in 2014, out of executives that disclose pay in 2013, is 3.7 percent ( $= 12 / 322$ ) for family-executives and 22.1 percent ( $= 57 / 258$ ) for non-family executives.

One way to rule out this explanation is to conduct a falsification test that investigates the pattern of deregistration (or pay-cuts) versus retirements before the adoption of mandatory disclosure rules. If the frequency of deregistration (or pay-cuts) to that of retirement before the adoption is substantially lower for family-executives, but not for non-executives, we can still claim that the results in Table 4 are valid. Columns (1)-(5) in Table 5 attempt to do this using deregistration alone. We leave out pay-cuts and *de facto* deregistration from our analyses because data on Executive Pay and retirement pay are not available before 2013 at the individual executive level. In Column (1), where we fit the model using the samples before the adoption (2009-2012), the coefficient on Family Executive is extremely small and statistically insignificant. This is true even if we leave out firm fixed effects (Column (2)). If we fit the model using the samples in 2013 (Column (3)) or in 2014 (Column (4)), the coefficient is large and highly significant. Combining 2013 and 2014 makes it even more significant (Column (5)). Note that the coefficients in Table 5 Column (4) and the coefficients in Table 4 Column (4) cannot be

identical, as we are leaving out pay-cuts from our analyses and treating *de facto* deregistration as retirement in Table 5.

More convincingly, we can use a difference-in-differences framework, that is, comparing family and non-family executives before and after the adoption of mandatory disclosure rules. If family executives are truly engaging in evasion after the adoption of mandatory disclosure rules, one should see a jump in deregistration of family executives, as opposed to their retirement immediately after the adoption, whereas this should not be the case for non-family executives.

Figure 2 shows this graphically. In Figure 2A, we show the number of deregistration cases. During the four years leading up to 2012, the numbers vary little over time, family executives showing between 0 and 3 cases, whereas non-family executives showing between 16 and 20 cases. However, in 2013, the number of cases jumps to 19 for family-executives, whereas that of non-family executives increases only slightly to 23. This break away from the pre-adoption period pattern weakens but persists in 2014. The number of deregistration cases for family-executives (8) is well above its pre-adoption period numbers (0~3), whereas that for non-family executives (12) is below its pre-adoption period numbers (16-20). Figure 2B shows a similar pattern using a different measure. We compute the fraction of deregistration (in percentage terms), which is the number of deregistration divided by the sum of deregistration and retirement. This fraction, which is no more than 27 percent for family-executives before the adoption, jumps to 45 percent in 2013, and remains high at 47 percent in 2014. Contrarily, this measure shows no significant change for non-family executives throughout the sample period. In fact, this measure is quite similar between the two group of executives during 2009-2012. This suggests that family executives are no more likely to deregister than non-family executives during this period.

Table 5 Colum (6) runs a difference-in-differences regression, where family and non-

family executives are the treatment and control groups, respectively, and FY13 and FY14 are the treatment period. Consistent with Figure 2, the interaction term between the Family Executive (treatment group) dummy and the FY13&14 (treatment period) dummy is positive and statistically significant at the 1 percent level. Note that in Column (6) we use the LPM in lieu of probit due to difficulties in interpreting the interaction effects using the latter model.<sup>10</sup>

#### 5.4 *Executive-to-Worker Pay Ratio and Disclosure Evasion*

In this subsection, we further investigate the evasive behavior of family executives by examining whether evasion tendency strengthens as the pay gap between executives and average workers (Executive-to-Worker Pay Ratio) widens. If executives worry that a wide pay gap may trigger management-labor disputes, they may choose to evade disclosure.

Table 6 shows the results. First, Column (1) replicates the result in Table 4 Column (4) using a smaller sample, where we have data on Executive Pay (w/o retirement). Note that Executive Pay (w/o retirement) equals (Executive Pay – retirement pay), demeaned by the industry average, and it is treated as missing, if the value of this variable falls below the 500 million won threshold. In addition, note that we use Executive Pay (w/o retirement) when computing the Executive-to-Worker Pay Ratio. The result is similar to our previous result with a

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<sup>10</sup> According to Ai and Norton (2003), interaction effects estimated from logit or probit have z-statistics that have a distribution of their own. The linear probability model (LPM), which does not have this problem, is more interpretable. Furthermore, note that the LPM is as good as non-linear models such as logit or probit, in estimating marginal effects. Angrist and Pischke (2009) note that “while a nonlinear model may fit the conditional expectation function (CEF) for limited dependent variable models (LDVs) more closely than a linear model, when it comes to marginal effects, this probably matters little.” In addition, Wooldridge (2010) notes that “...If the main purpose of estimating a binary response model is to approximate the partial effects of the explanatory variables, averaged across the distribution of  $x$ , then the LPM often does a very good job. The fact that some predicted probabilities are outside the unit interval need not be a serious concern.”



smaller coefficient on Family Executive (0.200 instead of 0.283). Next, in Column (2), we add the Executive-to-Worker Pay Ratio to see if it increases the likelihood of evasion in general. The coefficient, although small, is positive and significant at the 10 percent level. A 1-SD change (approximately 30) in the Pay Ratio increases the likelihood of evasion by only 3 percent, on average.

In Columns (3) and (4), we conduct subsample tests, where the full sample is split by the median value of the Executive-to-Worker Pay Ratio (-1.76). It shows that the evasive behavior of family executives mainly occurs in firms where the pay gap is high. The coefficient on Family Executive in the high gap subsample (Column (3)) is substantially larger than that in the low gap subsample (Column (4)) and that in the full sample (Column (1)). The coefficient of 0.354 in Column (3) suggests that if a firm has above-median pay gap, family executives are more likely to engage in evasive behavior than are non-family executives by 35.4 percent, on average.

In Column (5), we run a linear probability model, adding the Above Median Pay Ratio dummy and its interaction with the Family Executive dummy. The Above Median Pay Ratio is a binary variable taking a value of 1 if the Executive-to-Worker Pay Ratio is above its median value and 0 otherwise. The results show that the family executive's tendency of evasion strengthens as the pay gap between executives and average workers widens. The coefficient on the interaction term is positive, large, and significant at the 10 percent level. In sum, we have a series of results that confirm our hypothesis. Also note that our results are consistent with the findings in the existing literature that an excessive level of pay or high media attention induces executives to either evade disclosure or comply incompletely.

### *5.5 Level of Executive Compensation and Pay-Cuts*

Lastly, we investigate an executive's choice between two evasion strategies. We hypothesize that proximity between the original level of pay in 2013 and the threshold that triggers mandatory disclosure can be an important factor. That is, if the original level of pay in 2013 is close to the threshold of 500 million won, we conjecture that family executives would rather evade through pay-cuts than deregistration, as the costs of the former are substantially lower than that of the latter.

Table 7 shows the results using a sample that consists of executives who either evade mandatory pay disclosure through pay-cuts, deregistration, or *de facto* deregistration. Note that the sample is split into family (Columns (1) and (2)) and non-family subsamples (Columns (3) and (4)). In Panel A, we measure the level of pay in 2013 using Executive Pay and KRW 500-600M, whereas in Panel B, we measure it using KRW 500-700M and KRW 500-800M.

Several observations are noteworthy. First, we find evidence that family executives prefer pay-cuts rather than deregistration if the level is low or close to the threshold of 500 million won, regardless of how we measure the level of pay. In Panel A Column (1), the coefficient on  $\ln(\text{Executive Pay})$  is negative and statistically significant at the 1 percent level. The coefficient of -0.262 suggests that a 1 percent drop in Executive Pay leads to an increase in the likelihood of pay-cuts by 2.62 percent. In Panel A Column (2), the coefficient on KRW 500-600M is positive and statistically significant at the 1 percent level. A coefficient of 0.543 suggests that executives with Executive Pay between 500 and 600 million won are more likely to undertake pay-cuts than other executives by 54.3 percent, on average.

Second, the tendency to engage in pay-cuts rather than deregistration weakens if the gap between the 2013 pay and the threshold of 500 million won widens. When we use KRW 500-700M or KRW 500-800M in lieu of KRW 500-600M, the coefficient drops almost by half, from

0.543 to 0.227 or 0.242. Third, we do not find any evidence that the level of pay influences the choice of evasive strategies by non-family executives. None of the coefficients on pay level is statistically significant. This is not surprising, as they do not show any strong evidence of evasion to begin with.

Fourth, among the control variables, we find that Representative Director is a strong predictor of pay-cuts. The coefficients are positive and statistically significant at the 1 percent level across all specifications. This is plausible because representative directors, who enjoy greater power and prestige than other directors, may have more to lose when they step down from the board. In addition, in the family-executive subsample, Executive Age predicts the likelihood of pay-cuts. This is plausible if aged executives are taking non-registered executive positions before retirement. Lastly, Executive Ownership matters, suggesting that executive pay and dividend income from share ownership are substitutes for family-executives.

## **6. Conclusion**

To fulfill their purpose, rules of executive compensation disclosure should be well designed. At the minimum, they should not have loopholes allowing executives to evade disclosure obligations. In this study, we highlight the danger in limiting the coverage of executives that are subject to disclosure.

Exploiting the 2013 rule change in Korea, we show that the restrictive coverage of only registered board members with total annual pay exceeding 500 million Korean won allowed many executives to evade disclosure, either through deregistration or pay-cuts. We also show that this evasion is mostly carried out by family executives in firms where the executive-to-work pay ratio is high, that is, by executives that have low costs of evasion, and in the firms where the

cost of disclosure is high. Between the two evasion strategies, we find that family executives prefer pay-cuts over deregistration if their pay level in the prior year is close to the threshold. That is, when the cost of pay-cut is substantially lower than the cost of deregistration.

Witnessing such evasion, Korean policy-makers reacted in 2016 by amending the law to require that the top five highest paid executives in a firm, regardless of their board membership, disclose their individual compensation by name. However, this rule change is a partial fix as the 500 million won threshold was not lowered. To prevent evasion through pay-cuts and to have a rule that covers a wider range of executives, the threshold should be lowered to 100 million won.

We do not believe that the evasion from mandatory disclosure is merely a Korean phenomenon. So long as a rule has restrictive coverage, it is vulnerable to evasion. In addition, given the heterogeneity of disclosure rules across countries, we expect that evasion can also have diverse forms. Investigating the different modes of evasion can be an interesting subject for a future study.

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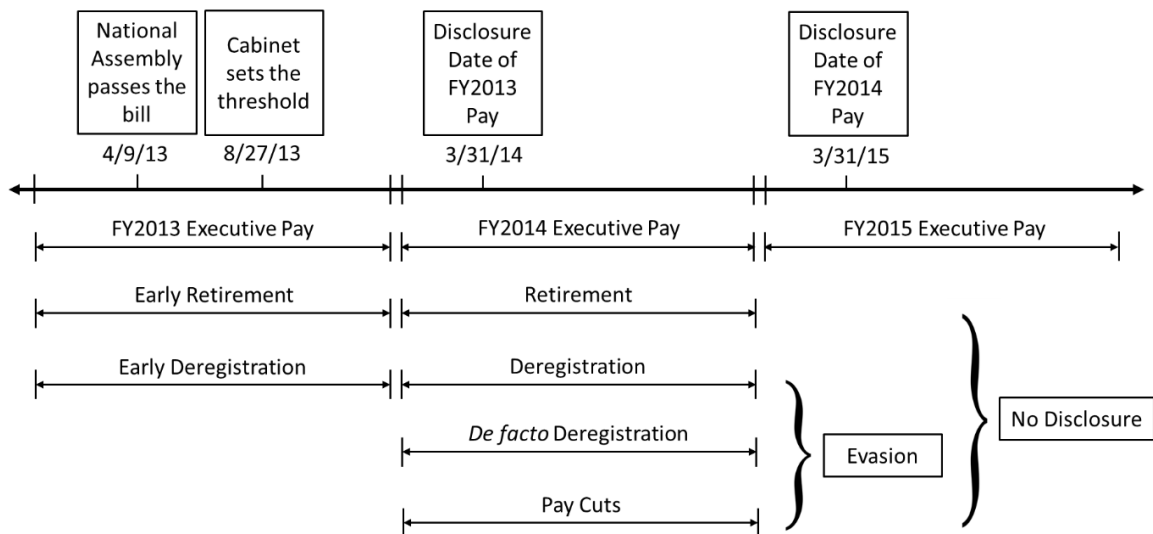
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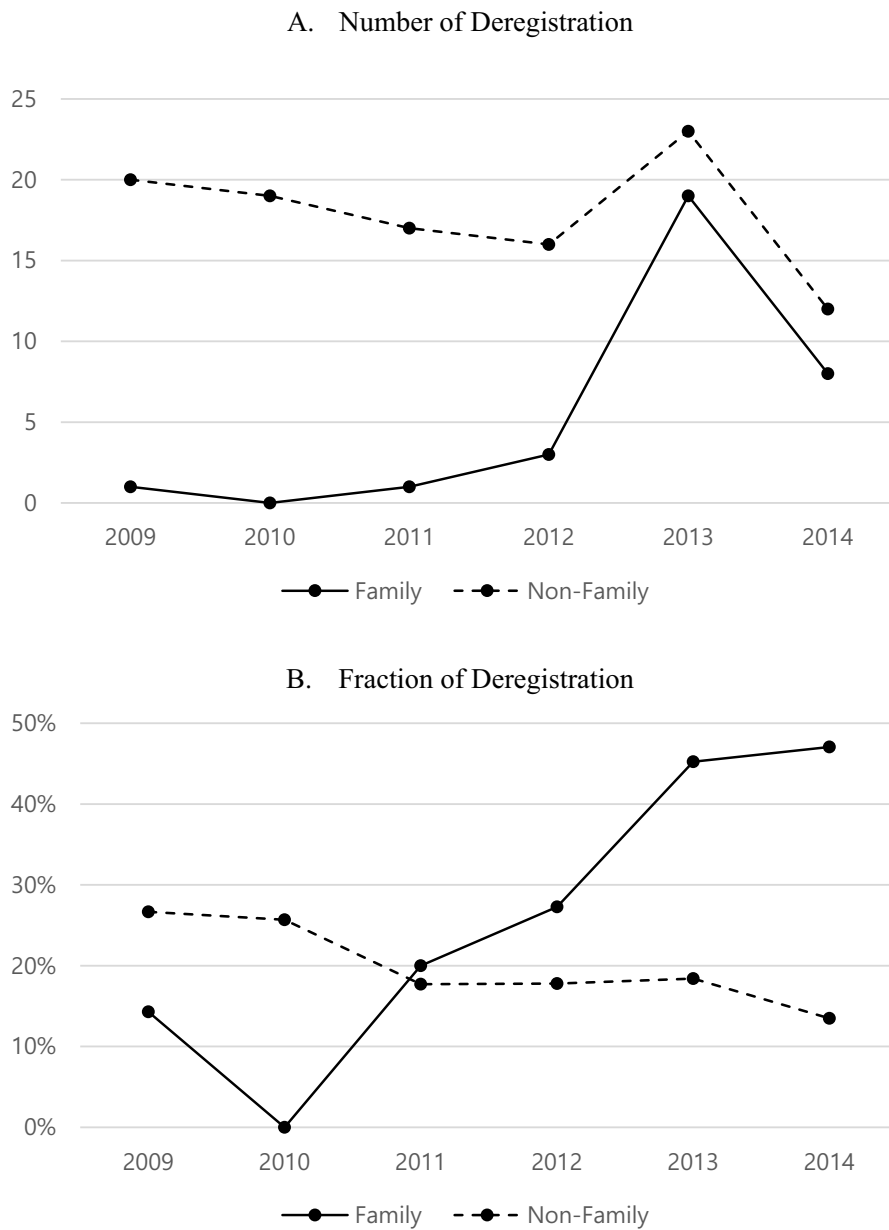
**Figure 1: Executive Pay Disclosure and Evasion Time Line**

This figure depicts major events concerning executive pay disclosure and the periods three types of evasion took place on a time line. On April 9, 2013, the National Assembly passed a bill mandating the disclosure of pay for each registered board member by name, if it is above a certain threshold amount. On August 27, 2013, the Cabinet sets this threshold to be 500 million won per fiscal year. On March 31, 2014 publicly traded firms (with fiscal year ending in December) disclose individual-level pay for the first time. On March 31, 2015, they disclose for the second time. An executive is evading disclosure if he or she is mandated to disclose compensation in FY2013, but not in FY2014, and who also meets one of the following three conditions: (i) registered as a director in both FY2013 and FY2014 (i.e., Pay Cut), (ii) listed as a non-registered executive in FY2014 (i.e., deregistration), (iii) not registered as a director, nor listed as a non-registered executive in FY2014, but no record of retirement pay in FY2013 (i.e., de facto deregistration). Note that an executive can receive pay as a registered director during the first few months of FY2013, convert into a non-registered executive at some point of time in FY2013, and stay as such during the remaining months of FY2013 and during the full months of FY2014 (i.e., early deregistration). We classify these early movers as executives evading pay disclosure by deregistration, along with those that convert into non-registered executives in the beginning of FY2014. Likewise, an executive can receive pay as a registered director during the first few months of FY2013 and retire at some point of time in FY2013 (i.e., early retirement). So long as there is a record of retirement pay in FY2013, we classify them as retiring executives, along with those that retire in the beginning of FY2014.



**Figure 2: Deregistration Trend Over Time**

These figures compare the number and the fraction of deregistration between family and non-family executives from 2009 to 2014. An executive is engaging in deregistration if he or she is registered as a director in year  $t - 1$ , but listed as a non-registered executive in year  $t$ . The fraction of deregistration is the number of deregistration divided by the sum of deregistration and retirements.





**Table 1: Variable Definitions**

Variables	Definition	Source
<i>Compensation Variables</i>		
Executive Pay	Total annual pay (in hundred million won) to an executive in FY2013; total annual pay is mainly composed of salary, bonus, cash incentives, gains from stock option exercises, and retirement pay.	
Executive Pay (w/o retirement)	Total annual pay minus retirement pay. If below 500 million won, we treat it as a missing value.	Annual business reports of FY2013 in the Data Analysis, Retrieval, and Transfer System (DART) administered by Financial Supervisory Service (FSS)
KRW 500-600 M	Binary variable taking a value of 1 if Executive Pay is between 500 and 600 million won, and 0 otherwise.	
KRW 500-600 M (w/o retirement)	Binary variable taking a value of 1 if Executive Pay (w/o retirement) is between 500 and 600 million won, and 0 otherwise.	
Worker Pay	Average wage of company employees (in million won) in FY2013.	Total Solution 2000 (TS2000) compiled by Korea Listed Companies Association (KLCA)
<i>Executive-to-Worker Pay Ratio</i>		
Executive-to-Worker Pay Ratio	Executive Pay (w/o retirement) divided by Worker Pay in FY2013, demeaned by industry averages	
Above Median Pay Ratio	Binary variable taking a value of 1 if the Executive-to-Worker Pay Ratio is above its median value; 0 otherwise.	Annual business reports of FY2013 from DART and TS2000
<i>Executive Level Variables</i>		
Family Executive	Binary variable taking a value of 1 if an executive is a controlling family member, and 0 otherwise.	Cheong and Kim (2014) Original source: board member filings from the Online Provision of Enterprises Information System (OPNI) administered by the Korea Fair Trade Commission (KFTC); annual business reports and 5% block holding filings from DART
Pay Cut	Binary variable taking a value of 1 if an executive is registered as a director in both FY2013 and FY2014, is mandated to disclose compensation in FY2013, but not in FY2014; 0 otherwise. Disclosure becomes mandatory if Executive Pay is greater than 500 million won.	
Evasion	Binary variable taking a value of 1 if an executive is mandated to disclose compensation in FY2013, but not in FY2014, and who also meets one of the following three conditions: (i) registered as a director in both FY2013 and FY2014 (i.e., Pay Cut), (ii) listed as a non-registered executive in FY2014 (i.e., deregistration), (iii) not registered as a director, nor listed as a non-registered executive in FY2014, but no record of retirement pay in	Annual business reports of FY2013 and FY2014 from DART

Variables	Definition	Source
	FY2013 (i.e., <i>de facto</i> deregistration); 0 otherwise. Note that an executive can receive pay as a registered director during the first few months of FY2013, convert into a non-registered executive at some point of time in FY2013, and stay as such during the remaining months of FY2013 and during the full months of FY2014 (i.e., early deregistration). We classify these early movers as executives evading pay disclosure by deregistration, along with those that convert into non-registered executives in the beginning of FY2014.	
Representative Director	Binary variable taking a value of 1 if an executive is a representative director of the firm in FY2013, and 0 otherwise.	Annual business reports of FY2013 from DART
Executive Age	Executive's age as of FY2013.	TS2000
Executive Ownership	Common shares owned by an executive (in percentage terms) in FY2013.	TS2000, annual business reports from DART
<i>Industry-Firm Level Variables</i>		
Proprietary Information	Sum of the following four binary variables: (i) 1 if HHI (measured by sales) is below the sample median, and 0 otherwise, (ii) 1 if product differentiation level (sales/operating costs) is below the sample median, and 0 otherwise, (iii) 1 if industry market size (measured by sales) is above the sample median, and 0 otherwise, (iv) 1 if industry entry cost (measured by PP&E) is below the sample median, and 0 otherwise. For details, see Karuna (2007) and Robinson, Xue, and Yu (2011).	TS2000 and Korea Investors Service-Value (KIS-Value) provided by National Information & Credit Evaluation Inc. (NICE)
Large Business Group	Binary variable taking a value of 1 if the firm is a member of a large business group (> 5 trillion won), as designated by the Korea Fair Trade Commission (KFTC) in FY2013.	KFTC press releases
Industry-Adjusted ROA	ROA (return on assets) minus industry average ROA in FY2013, where industry is classified using two-digit KSIC in FY2013.	TS2000
Firm Size	Sales in thousand KRW as of FY2013.	TS2000, annual business reports of FY2013 from DART
Firm Age	Number of years since the firm's establishment as of FY2013.	TS2000
Foreign Ownership	Fraction of common shares (in percentage term) owned by foreigners in FY2013.	TS2000
Inside Ownership	Fraction of common shares (in percentage terms) owned by the controlling shareholder and the related-parties (relatives, company board members, and affiliated firms) in FY2013.	TS2000
Board Size	Number of directors on the board in FY2013.	Annual business reports of FY2013 from DART
Outside Director Ratio	Number of outside directors divided by board size in FY2013.	Annual business reports of FY2013 from DART

**Table 2: Summary Statistics**

The tables below contain the summary statistics of the variables we use in this study. Panel A uses a sample of executives that disclose their compensation in FY2013, but not in FY2014 (evasion plus retirement sample), whereas Panel B uses a sample that excludes retiring executives from the sample we use in Panel A (evasion sample). The last column in each panel conducts difference-in-mean tests for each variable between family and non-family executives. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively.

**Panel A: Evasion plus Retirement Sample**

	Family Executives					Non-Family Executives					Difference in Mean		
	N	Mean	S.D.	Min	Median	Max	N	Mean	S.D.	Min		Median	Max
<i>Compensation Variables</i>													
Executive Pay (in 100 million KRW)	80	15.39	18.84	5.01	8.32	112.00	115	13.54	18.04	5.02	7.35	162.60	1.85
Executive Pay (w/o retirement)	72	14.61	18.83	5.01	7.95	112.00	76	11.10	11.52	5.02	7.09	81.79	3.51
KRW 500 - 600 M	80	0.38	0.49	0.00	0.00	1.00	115	0.44	0.50	0.00	0.00	1.00	-0.07
KRW 500 - 600 M (w/o retirement)	72	0.39	0.49	0.00	0.00	1.00	76	0.49	0.50	0.00	0.00	1.00	-0.10
Worker Pay (in million KRW)	80	50.00	15.04	17.10	48.76	90.00	115	57.74	20.34	22.27	57.00	102.00	-7.74***
Executive-to-Worker Pay Ratio	72	1.58	26.45	-36.82	-0.56	133.20	76	-1.50	32.51	-55.85	-2.15	231.20	3.08
Executive-to-Worker Pay Ratio (raw)	72	28.177	30.937	8.355	18.090	166.875	76	22.314	33.666	5.657	14.524	274.814	5.863
<i>Executive Level Variables</i>													
Evasion	80	0.85	0.36	0.00	1.00	1.00	115	0.50	0.50	0.00	1.00	1.00	0.35***
Representative Director	80	0.80	0.40	0.00	1.00	1.00	115	0.54	0.50	0.00	1.00	1.00	0.26***
Executive Age	80	57.60	9.09	38.00	57.00	77.00	115	56.64	7.71	33.00	58.00	74.00	0.96
Executive Ownership	80	0.13	0.14	0.00	0.12	0.56	115	0.00	0.01	0.00	0.00	0.07	0.13
<i>Industry-Firm Level Variables</i>													
Proprietary Information	80	2.10	1.01	0.00	2.00	4.00	115	1.85	0.95	0.00	2.00	4.00	0.25*
Large Business Group	80	0.28	0.45	0.00	0.00	1.00	115	0.47	0.50	0.00	0.00	1.00	-0.20***
Industry-Adjusted ROA	80	-0.03	0.42	-1.53	0.00	2.81	115	-0.01	0.08	-0.35	0.00	0.16	-0.02
Sales (in billion KRW)	80	1433	3421	3.25	389	24000	115	5942	21000	9.66	568	160000	-4509**
Firm Age	80	30.48	17.07	3.00	26.00	64.00	115	33.12	18.87	2.00	31.00	83.00	-2.64
Foreign Ownership	80	0.11	0.14	0.00	0.05	0.58	115	0.15	0.15	0.00	0.11	0.59	-0.04**
Inside Ownership	80	0.28	0.21	0.00	0.23	0.84	115	0.35	0.15	0.12	0.33	0.72	-0.07***
Board Size	80	5.89	2.10	3.00	6.00	12.00	115	6.59	2.13	3.00	7.00	13.00	-0.70**
Outside Director Ratio	80	0.38	0.17	0.00	0.33	0.75	115	0.43	0.15	0.14	0.40	0.75	-0.05*

Panel B: Evasion Sample

	Family Executives					Non-Family Executives					Difference in Mean		
	N	Mean	S.D.	Min	Median	Max	N	Mean	S.D.	Min		Median	Max
<i>Compensation Variables</i>													
Executive Pay (in 100 million KRW)	68	14.96	19.27	5.01	8.32	112.00	58	11.43	12.58	5.02	6.58	81.79	3.53
Executive Pay (w/o retirement)	64	15.33	19.77	5.01	8.40	112.00	54	11.41	12.98	5.02	6.58	81.79	3.92
KRW 500 - 600 M	68	0.37	0.49	0.00	0.00	1.00	58	0.52	0.50	0.00	1.00	1.00	-0.15*
KRW 500 - 600 M (w/o retirement)	64	0.36	0.48	0.00	0.00	1.00	54	0.52	0.50	0.00	1.00	1.00	-0.16*
Worker Pay (in million KRW)	68	48.62	15.03	17.10	47.09	90.00	58	55.47	22.02	22.27	55.11	102.00	-6.85**
Executive-to-Worker Pay Ratio	64	3.32	27.14	-36.82	0.00	133.20	54	-0.59	37.72	-55.85	-2.89	231.20	3.92
Executive-to-Worker Pay Ratio (Raw)	64	29.685	32.380	8.355	20.774	166.875	54	24.677	39.321	5.5657	14.963	274.814	5.01
<i>Executive Level Variables</i>													
Pay Cut	68	0.47	0.50	0.00	0.00	1.00	58	0.48	0.50	0.00	0.00	1.00	-0.01
Representative Director	68	0.78	0.42	0.00	1.00	1.00	58	0.53	0.50	0.00	1.00	1.00	0.25***
Executive Age	68	56.56	8.79	38.00	55.00	75.00	58	55.29	8.58	33.00	56.00	73.00	1.27
Executive Ownership	68	0.15	0.14	0.00	0.12	0.56	58	0.01	0.01	0.00	0.00	0.07	0.14***
<i>Industry-Firm Level Variables</i>													
Proprietary Information	68	2.12	1.06	0.00	2.00	4.00	58	1.78	1.04	0.00	1.00	4.00	0.34*
Large Business Group	68	0.28	0.45	0.00	0.00	1.00	58	0.43	0.50	0.00	0.00	1.00	-0.15*
Industry-Adjusted ROA	68	0.00	0.39	-1.10	0.00	2.81	58	-0.01	0.09	-0.35	0.01	0.16	0.01
Sales (in billion KRW)	68	1390	3516	3.25	340.10	24000	58	8101	29000	9.66	416.80	160000	-6711*
Firm Age	68	30.27	16.66	3.00	26.00	64.00	58	32.48	19.05	2.00	27.00	83.00	-2.21
Foreign Ownership	68	0.11	0.13	0.00	0.06	0.58	58	0.15	0.15	0.00	0.11	0.56	-0.04*
Inside Ownership	68	0.27	0.21	0.00	0.23	0.84	58	0.33	0.14	0.12	0.30	0.72	-0.06*
Board Size	68	5.93	2.01	3.00	6.00	11.00	58	6.57	2.24	3.00	6.50	13.00	-0.64*
Outside Director Ratio	68	0.38	0.17	0.00	0.33	0.75	58	0.41	0.16	0.20	0.33	0.75	-0.03

**Table 3: Evasion through Deregistration and Pay-Cuts**

This table shows the break-up of executives that disclose pay in FY2013 into those that engage in pay-cuts, deregistration, *de facto* deregistration, retirements, and others in FY2014. See Figure 1 or Table 1 for the definitions of pay-cuts, deregistration, *de facto* deregistration, and retirement.

**Panel A. Break-up of Executives in Numbers**

	Disclose in 2013	Evasion in 2014			Total	Retirement	Others
		Pay-Cuts	Dereg.	<i>de facto</i> Dereg.			
Family Executives	322	32	28	8	68	12	242
Non-Family Executives	258	28	10	20	58	57	143
All Executives	580	60	38	28	126	69	385

**Panel B. Break-up of Executives in Fractions (%)**

	Disclose in 2013	Evasion in 2014			Total	Retirement	Others
		Pay-Cuts	Dereg.	<i>de facto</i> Dereg.			
Family Executives	100.00	9.94	8.70	2.48	21.12	3.73	75.16
Non-Family Executives	100.00	10.85	3.88	7.75	22.48	22.09	55.43
All Executives	100.00	10.34	6.55	4.83	21.72	11.90	66.38

**Table 4: Evasion by Family Executives**

This table reports the results of the probit (Columns (1)-(4)) and linear probability model (LPM) regressions (Column (5)) that predict the likelihood of evasion from mandatory pay disclosure (i.e., Evasion = 1) using an executive's affiliation to the controlling family (i.e., Family Executive = 1) and others. The sample in Column (1)-(4) consists of executives who disclose their pay in 2013, but not in 2014 (evasion plus retirement sample). In Column (5), we conduct a paired sample test that limits the sample to firms where at least one family executive and at least one non-family executive are either evading or retiring. Coefficients in Columns (1)-(4) are average marginal effects on probability and z-statistics (t-statistics in the case of Column (5)) use heteroscedasticity-consistent standard errors, in the parentheses. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively. Coefficients significant at the 5% level are in **bold**.

Dep. Variable: Evasion	Probit				LPM
	Evasion plus Retirement Sample				Paired Sample
	(1)	(2)	(3)	(4)	(5)
Family Executive	<b>0.248***</b> <b>(2.931)</b>	<b>0.280***</b> <b>(3.283)</b>	<b>0.284***</b> <b>(3.327)</b>	<b>0.283***</b> <b>(3.383)</b>	<b>0.531*</b> <b>(2.184)</b>
Representative Director	0.018 (0.266)	0.012 (0.182)	0.015 (0.224)	0.022 (0.321)	0.223 (1.056)
<i>ln</i> (Executive Age)	<b>-0.649***</b> <b>(-2.825)</b>	<b>-0.657***</b> <b>(-2.782)</b>	<b>-0.613**</b> <b>(-2.550)</b>	<b>-0.663***</b> <b>(-2.725)</b>	<b>-1.393**</b> <b>(-2.552)</b>
Executive Ownership	1.056 (1.515)	0.869 (1.275)	0.897 (1.383)	0.941 (1.484)	-1.618 (-1.853)
Proprietary Information		-0.011 (-0.376)	-0.010 (-0.343)	-0.018 (-0.588)	-0.145 (-0.820)
Large Business Group		0.057 (0.661)	0.073 (0.859)	0.080 (0.882)	0.099 (0.185)
Industry-Adjusted ROA		0.248 (1.355)	0.242 (1.316)	0.205 (1.020)	-5.839 (-1.392)
<i>ln</i> (Sales)		-0.022 (-0.995)	-0.027 (-1.170)	-0.026 (-1.127)	-0.080 (-0.605)
<i>ln</i> (Firm Age + 1)		0.040 (0.892)	0.041 (0.899)	0.047 (1.041)	<b>-0.771***</b> <b>(-3.964)</b>
Foreign Ownership			0.013 (0.047)	0.005 (0.021)	2.468 (1.002)
Inside Ownership			-0.168 (-0.784)	-0.145 (-0.687)	-0.628 (-0.558)
<i>ln</i> (Board Size)				0.155 (1.508)	-0.427 (-0.441)
Outside Director Ratio				-0.243 (-0.817)	0.366 (0.081)
Observations	195	195	195	195	22
Pseudo (Adjusted) R-squared	0.161	0.178	0.181	0.191	0.469

**Table 5: Deregistration by Family Executives (Falsification Test and DiD)**

This table reports the results of the probit (Columns (1)-(5)) and linear probability model (Column (6)) regressions that predict the likelihood of deregistration using an executive's affiliation to the controlling family (i.e., Family Executive = 1) and others. The regressions in Columns (1) and (6) include firm fixed effects, whereas other regressions do not. The coefficients in Columns (1)-(5) are average marginal effects on probability. The z-statistics in Columns (1), (2), and (5) (the t-statistics in Column (6)) use standard errors clustered at the firm level. The z-statistics in Columns (3) and (4) use heteroscedasticity-consistent standard errors. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively. Coefficients significant at the 10% level are in **bold**.

Dep. Variable: Deregistration	Probit Model					LPM
	2009-2012		2013	2014	2013-2014	2009-2014
	(1)	(2)	(3)	(4)	(5)	(6)
Family Executive	0.001	0.127	<b>0.277***</b>	<b>0.313**</b>	<b>0.308***</b>	-0.088
× FY13&FY14	(0.013)	(1.073)	<b>(2.925)</b>	<b>(2.186)</b>	<b>(3.729)</b>	<b>0.343***</b>
						<b>(2.687)</b>
Representative Director	<b>-0.142***</b>	<b>-0.142***</b>	<b>-0.196***</b>	<b>-0.094</b>	<b>-0.155***</b>	<b>-0.151***</b>
	<b>(-3.316)</b>	<b>(-3.226)</b>	<b>(-3.534)</b>	<b>(-1.216)</b>	<b>(-3.558)</b>	<b>(-3.634)</b>
<i>ln</i> (Executive Age)	-0.055	-0.106	-0.007	0.197	0.175	-0.014
	(-0.210)	(-0.548)	(-0.035)	(0.941)	(1.060)	(-0.076)
Executive Ownership	-3.463	<b>-4.486**</b>	-0.337	0.076	-0.080	0.178
	(-0.569)	<b>(-2.222)</b>	(-0.888)	(0.122)	(-0.218)	(0.267)
Proprietary Information	0.016	0.018	<b>-0.069*</b>	-0.019	-0.030	0.044
	(0.355)	(0.668)	<b>(-1.682)</b>	(-0.495)	(-1.059)	(0.932)
Large Business Group	<b>0.364**</b>	0.078	0.031	0.007	0.031	<b>1.051***</b>
	<b>(2.043)</b>	(1.163)	(0.446)	(0.085)	(0.462)	<b>(3.673)</b>
Industry-Adjusted ROA	0.515	0.301	0.927	0.089	0.004	0.131
	(1.591)	(0.828)	(1.350)	(0.335)	(0.020)	(0.561)
<i>ln</i> (Sales)	-0.066	0.002	-0.017	0.029	0.006	-0.059
	(-0.809)	(0.106)	(-0.829)	(0.702)	(0.278)	(-1.062)
<i>ln</i> (Firm Age + 1)	-0.033	0.015	<b>0.222***</b>	-0.034	<b>0.086**</b>	-0.103*
	(-0.561)	(0.484)	<b>(4.043)</b>	(-0.622)	<b>(1.972)</b>	(-1.843)
Foreign Ownership	-0.332	0.105	0.119	-0.442	-0.082	0.125
	(-0.450)	(0.592)	(0.498)	(-0.991)	(-0.397)	(0.211)
Inside Ownership	-0.400	<b>0.240*</b>	0.026	0.098	-0.098	-0.372
	(-1.129)	<b>(1.707)</b>	(0.155)	(0.359)	(-0.600)	(-1.067)
<i>ln</i> (Board Size)	0.148	0.132	-0.014	-0.120	-0.056	-0.071
	(1.300)	(1.518)	(-0.130)	(-1.095)	(-0.628)	(-0.542)
Outside Director Ratio	-0.259	-0.130	-0.286	0.163	-0.139	-0.135
	(-1.185)	(-0.906)	(-1.126)	(0.373)	(-0.542)	(-0.525)
Year FE	Y	Y	N	N	Y	Y
Firm FE	Y	N	N	N	N	Y
Observations	365	365	167	106	273	638
Pseudo (Adjusted) R-squared	0.578	0.080	0.230	0.140	0.141	0.181

**Table 6: Executive-to-Worker Pay Ratio and Evasion by Family Executives**

This table reports the results of probit (Columns (1)-(4)) and linear probability model (Column (5)) regressions that predict the likelihood of evasion from mandatory pay disclosure (i.e., Evasion = 1) using an executive's affiliation to the controlling family (i.e., Family Executive = 1), Executive-to-Worker Pay Ratio (industry-adjusted), and others. The sample consists of executives who disclosed their pay in 2013, but not in 2014 (evasion plus retirement sample). Columns (1)-(2), and (5) uses the full sample, whereas Columns (3) and (4) uses two subsamples split by the Executive-to-Worker Pay Ratio's sample median value of -1.76. The coefficients in Columns (1)-(4) are average marginal effects on probability. We report z-statistics (t-statistics in the case of Column (5)), using heteroscedasticity-consistent standard errors, in the parentheses. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively. Coefficients significant at the 10% level are in **bold**.

Dep. Variable: Evasion	Probit				LPM
	Full Sample		Pay Ratio Subsample		Full Sample
	(1)	(2)	Above Median (3)	Below Median (4)	(5)
Family Executive	<b>0.200***</b> (2.638)	<b>0.199***</b> (2.631)	<b>0.354***</b> (4.062)	0.047 (0.655)	0.068 (0.646)
× Above Median Pay Ratio					<b>0.256*</b> (1.886)
Above Median Pay Ratio					-0.117 (-1.087)
Executive-to-Worker Pay Ratio		<b>0.001*</b> (1.734)			
Representative Director	0.018 (0.270)	0.014 (0.205)	0.026 (0.266)	0.080 (0.921)	0.018 (0.229)
<i>ln</i> (Executive Age)	<b>-0.483*</b> (-1.805)	<b>-0.475*</b> (-1.792)	-0.081 (-0.287)	<b>-1.573***</b> (-4.265)	<b>-0.490**</b> (-1.984)
Executive Ownership	0.081 (0.191)	0.067 (0.157)	-0.348 (-0.914)	<b>1.133**</b> (2.305)	-0.065 (-0.258)
Proprietary Information	-0.008 (-0.299)	-0.009 (-0.329)	-0.006 (-0.155)	-0.009 (-0.243)	-0.016 (-0.562)
Large Business Group	<b>0.155*</b> (1.667)	<b>0.153*</b> (1.717)	<b>-0.374*</b> (-1.703)	<b>0.175**</b> (2.064)	0.160 (1.368)
Industry-Adjusted ROA	0.239 (1.445)	0.228 (1.414)	<b>0.562**</b> (2.097)	0.057 (0.443)	0.116 (1.107)
<i>ln</i> (Sales)	-0.026 (-1.065)	-0.025 (-1.046)	-0.030 (-0.953)	0.004 (0.175)	-0.026 (-1.131)
<i>ln</i> (Firm Age + 1)	<b>0.067*</b> (1.647)	<b>0.067*</b> (1.647)	0.002 (0.039)	0.104 (1.622)	0.078 (1.441)
Foreign Ownership	-0.002 (-0.009)	-0.011 (-0.050)	0.207 (0.513)	-0.038 (-0.135)	0.034 (0.126)
Inside Ownership	0.139 (0.635)	0.160 (0.732)	0.009 (0.033)	<b>0.595**</b> (2.260)	0.240 (1.039)
<i>ln</i> (Board Size)	0.005 (0.051)	-0.000 (-0.001)	<b>0.274*</b> (1.787)	-0.120 (-1.143)	0.033 (0.301)
Outside Director Ratio	-0.255 (-0.939)	-0.229 (-0.880)	0.842 (1.403)	<b>-0.504*</b> (-1.752)	-0.406 (-1.533)
Observations	148	148	74	74	148
Pseudo (Adjusted) R-squared	0.161	0.170	0.243	0.441	0.072



**Table 7: Pay-Cuts versus Deregistration**

This table reports the average marginal effects on probability from probit regressions that predict the likelihood of pay-cuts (i.e., Pay Cut = 1) using the level of compensation (i.e., Executive Pay and KRW 500-600M in Panel A, KRW 500-700M, and KRW 500-800M in Panel B), and others. The sample consists of executives who evade mandatory pay disclosure by either pay-cuts, deregistration, or *de facto* deregistration (i.e., Evasion = 1). Columns (1) and (2) in each panel use the family executive subsample, whereas Columns (3) and (4) in each panel use the non-family executives subsample. We report z-statistics, using heteroscedasticity-consistent standard errors, in the parentheses. \*\*\*, \*\*, and \* indicate significance at the 1%, 5%, and 10% levels, respectively. Coefficients significant at the 10% level are in **bold**.

Panel A. Executive Pay and KRW 500-600M

Dep. Variable: Pay Cut	Family Executive		Non-Family Executive	
	(1)	(2)	(3)	(4)
<i>ln</i> (Executive Pay)	<b>-0.262***</b> <b>(-5.288)</b>		-0.017 (-0.233)	
KRW 500-600M		<b>0.543***</b> <b>(3.770)</b>		-0.120 (-1.142)
Representative Director	<b>0.273***</b> <b>(4.600)</b>	<b>0.252***</b> <b>(3.854)</b>	<b>0.356***</b> <b>(3.894)</b>	<b>0.351***</b> <b>(3.959)</b>
<i>ln</i> (Executive Age)	<b>-0.613**</b> <b>(-2.505)</b>	-0.308 (-0.982)	0.482 (1.150)	0.624 (1.456)
Executive Ownership	<b>0.419*</b> <b>(1.691)</b>	<b>0.799***</b> <b>(2.735)</b>	-5.076 (-1.094)	-4.431 (-0.803)
Industry or Firm-Level Variables	Y	Y	Y	Y
Observations	68	68	58	58
Pseudo R-squared	0.584	0.578	0.434	0.446

Panel B. KRW 500-700M and KRW 500-800M

Dep. Variable: Pay Cut	Family Executive		Non-Family Executive	
	(1)	(2)	(3)	(4)
KRW 500-700M	<b>0.227***</b> <b>(2.682)</b>		0.095 (0.922)	
KRW 500-800M		<b>0.242***</b> <b>(3.594)</b>		0.081 (0.788)
Representative Director	<b>0.256***</b> <b>(3.420)</b>	<b>0.244***</b> <b>(3.637)</b>	<b>0.354***</b> <b>(3.851)</b>	<b>0.360***</b> <b>(3.978)</b>
<i>ln</i> (Executive Age)	<b>-0.515*</b> <b>(-1.782)</b>	<b>-0.451*</b> <b>(-1.695)</b>	0.457 (1.116)	0.434 (0.992)
Executive Ownership	0.453 (1.561)	<b>0.509*</b> <b>(1.884)</b>	-4.643 (-1.068)	-4.211 (-0.920)
Industry or Firm-Level Variables	Y	Y	Y	Y
Observations	68	68	58	58
Pseudo R-squared	0.510	0.522	0.443	0.440