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Earnings management by controlling shareholders who plan for stock gifts: Korean evidence*

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ABSTRACT

We examine whether controlling shareholders who plan for stock gifts would manage earnings in an attempt to depress stock prices prior to gifting stocks to related parties. Gift taxes are levied based on the average market value of the stock transferred for a certain period known as the valuation period. This process enables controlling shareholders to be incentivized to depress stock prices during this period and thereby alleviate tax burden. We discover that the firms that have stock gift transactions in the sample significantly decrease their discretionary accruals in the quarters that precede and/or overlap with the valuation period. Earnings management that decreases income is statistically significant when stock gifts are made for individuals who are the related parties and family members of controlling shareholders. By contrast, we do not observe a similar earnings-management behavior in cases where stock gifts are donated to institutional donees who are not subject to gift taxes.

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Stock gifts; gift taxes; earnings management; controlling shareholders

1. Introduction

One of the salient features of the corporate governance of most Korean companies is that the controlling shareholders virtually manage the operations of their companies (Claessens, Djankov, and Lang 2000). Most of these controlling shareholders usually bequeath their ownership interests to the next generation through a stock gift in order to retain the governing power within their own families. However, the highest applicable estate and gift tax rate is 50% in Korea¹ so that the cross-generational wealth transfers can only be consummated at a substantial tax cost. For an example, in 2007, Seung-Youn Kim of Hanwha Group gave 3 million shares of Hanwha Corp. as a gift to his three sons, reducing his ownership interest from 20.97 to 16.97%. This stock gift would have cost his children approximately \$80 million in tax. For another example, the controlling shareholder of Shinsegae, the largest Korean department store chain, transferred his entire 7.82% stake to his children in 2006. And the family paid \$452 million in gift tax, which is the largest amount of gift tax ever paid in Korea to date.

Be that as it may, a more practical justification for estate and gift taxes can be found in the Korean context. Chaebols, the Korean gigantic business conglomerates governed by a few controlling shareholders and their family members, are pinpointed as one of the culprits of economic inequality in the nation. Social activists believe that inequality further deteriorates because of cross-generational transfers of economic power by Chaebols. They argue that an inexorable system of heavy estate and gift taxes is commendable and could be justified as a means to alleviate economic inequity in Korea.

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A similar voice is heard in other Asian countries. For example, Chinese officials expressed concerns on the severely unequal wealth distribution in the nation and the increasing disparity between the rich and poor. A 2014 report co-prepared by a leading Chinese bank and a research institute² indicates that 17,000 of the richest people aggregately possess personal assets worth over 31 trillion RMB, which amounts to approximately half of the nation's 2014 GDP. The report also states that most of these wealthy people manage their own companies and eagerly plan to transfer their businesses to their children. To counteract the effects of such economic inequality, the Chinese government prepared in 2010 a draft bill of estate and gift tax laws, which stipulated a maximum of 50% tax rate for a gift or a bequest worth over 10 million RMB.³

In Korea, tax on gift stock is levied on the stock's *average* market value over the period of four months, two months before, and two months after the gift transaction, which is known as *valuation period*. Therefore, controlling shareholder planning for a stock gift may be incentivized to depress the price of stock during the valuation period and alleviates gift-tax burden. At least two short-term schemes are available to controlling shareholders who are attempting to depress stock price during the valuation period without harming long-term firm value. One is to voluntarily disclose bad news regarding the firm and withhold good news during the period. This possibility of 'discretionary disclosure' under information asymmetry has been investigated by Jung and Park (2009) who discover supporting empirical evidence. The other scheme of which the controlling shareholders avail themselves is to deflate *reported earnings* because earnings, especially earnings surprises, significantly affect stock price.

The main purpose of this paper is to examine empirically whether Korean controlling shareholders manage the level of reported earnings as they plan for a stock gift. In particular, we hypothesize that the controlling shareholders would lower discretionary accruals (DAC) in the quarters immediately preceding and/or overlapping the valuation period to suppress the price of their stock.

To test this earnings management incentive, we analyze a sample of 423 gift transactions involving 229 firms from 2000 to 2014. After controlling for other determinants of DAC, we find that the sample firms significantly reduce discretionary accruals in the quarters immediately preceding and/or overlapping the valuation period, compared with those in other quarters. However, we do not observe a similar earnings-management behavior in the cases of stock gifts made to institutional donees which are not subject to gift taxes.

The contribution of this paper is twofold: First, it expands the scope of the existing literature on corporate earnings management (EM) by documenting new evidence of EM motivated by tax purposes. Most prior studies on tax-motivated EM (e.g. Scholes, Wilson, and Wolfson 1990; Klassen 1997; Petroni and Shackelford 1999) address inter-temporal income-shifting behavior which is aimed to reduce corporate income taxes. These studies generally show that during a period of decreasing corporate tax rates, firms are motivated to shift current-period earnings to the subsequent period in which a lower tax rate is applied. Although this study also provides empirical evidence of tax-motivated EM, it takes place in a unique and rare institutional setting. To begin with, the controlling shareholders who are planning stock gifts have incentives to decrease earnings to minimize personal tax costs. In addition, the tax cost and the non-tax benefit of wealth transfer in this study is solely ascribed to the family of the controlling shareholders, whereas the related cost and benefit in the prior studies are attributable to firms.

Secondly, although it is limited to the institutional environment of Korea, this study suggests that controlling shareholders are ready to employ all possible schemes, including EM, to minimize the cost of wealth transfer to the next generation. Therefore, tax authorities should give careful consideration to the way in which stock is valued for gift-tax purposes so as to countervail those schemes and possibly to alleviate the societal problem of economic inequality.

The remainder of this study is organized as follows. Section 2 delineates the institutional and legal background of stock gifts in Korea. Section 3 provides a review of related literature on managers' opportunistic behavior of earnings management and stock gifts. Section 3 also presents the research hypotheses. Section 4 outlines the sample and the empirical research design, whereas Section 5 reports the main results. Finally, Section 6 summarizes the paper.

2. Institutional and legal background of stock gifts in Korea

Unlike in the US, grantees in Korea pay gift taxes. This may be a huge burden to grantees who frequently pay with a part of the gifted stocks and bear the cost of ownership reduction. Therefore, controlling shareholders aim to transfer their ownership to their next generation and simultaneously manage the tax cost to a minimum. Historically, criticisms have been raised among tax reformers regarding the ease at which controlling shareholders can choose the *timing* of stock gifts to keep gift tax burden as low as possible. Thus, the valuation rule on stocks for gift-tax purposes in Korea has become increasingly stringent over time to increase the difficulty of choosing an 'opportune' time for a stock gift for controlling shareholders.

Table 1 presents the chronology of the valuation rule for taxation of the gift of listed stocks in Korea. Up until 1997, gift taxes were levied on the closing market price *on* the date of gift. Under this tax provision, a significant strategy of stock-gift planning for controlling shareholders would be to simply wait for the lowest possible stock price and then make the planned gift. Although quite simple, this gift-planning strategy was most effective in minimizing taxes for cross-generational wealth transfer. For this reason, this stock valuation rule was harshly criticized by tax reformers. In 1997, in response to this criticism, legislators amended the tax law so that the fair market value of the stock for gift-tax purposes would equal the *average* of the daily closing prices for the three-month period immediately *before* the date of gift.

However, even under this new provision, controlling shareholders would still adopt the same strategy despite having to bear higher taxes overall because the average price would usually be higher than the price on the date of gift. Consequently, the valuation rule was further amended in 2000 in order to make it more difficult for controlling shareholders to time the date of gift to coincide with the end of the period of decreasing prices. The fair market value of stock for gift-tax purposes would now be the average of the closing prices over the four-month period stretching from two months *before* to two months *after* the date of gift. This newly enacted valuation rule for stock gifts is believed to render it more difficult for controlling shareholders to choose an opportune time for a stock gift because the stock price movement in the two-month period subsequent to the gift is unseen and therefore uncertain on the date of gift.

After 2000, in contrast to the prior years, it would not be an optimal gift-planning strategy for controlling shareholders to passively wait for a timely moment in order to keep the gift tax burden to a minimum. Instead, it might benefit to actively influence stock prices, particularly subsequent to the gift transaction: controlling shareholders would have strong incentives to depress stock prices during the valuation period (especially in the two-month period after the date of gift).

3. Related research and hypothesis development

Accounting theory views earnings management either from the informative perspective (Subramanyam 1996; Chaney, Jeter, and Lewis 1998), or the opportunistic perspective (Burgstahler and Dichev 1997; Healy and Wahlen 1999). From the informative perspective, earnings management is viewed as a benign behavior of a faithful top manager who communicates his or her inside information to the shareholders. The majority of the prior studies, however, primarily view earnings management as a

Table 1. Chronology of the valuation rule for taxation of stock gifts of listed companies.

Period	Gift taxes are levied on
Before 1996.12.31	The closing stock price <i>on</i> the date of gift
1997.1.1 ~ 1999.12.31	The average of the daily closing prices for the three-month period immediately preceding the date of gift
After 2000.1.1	The average of the daily closing prices for the four-month period covering two months before and two months after the date of gift

manager's opportunistic behavior to maximize his or her own welfare (Scott 2003). Our study is in accordance with this stream of earnings management research (Healy 1985; Jones 1991; DeFond and Jiambalvo 1994; Friedlan 1994; Guenther 1994; Dechow, Sloan, and Sweeney 1996; Yoon and Lee 2001; Jeon and Park 2002; Cheng and Farber 2008; Jaggi, Leung, and Gul 2009; Armstrong, Jagolinzer, and Larcker 2010).

The extant literature evidences that managers or controlling shareholders affect the firm's accounting decisions in an attempt to increase their own wealth. A plethora of US studies find evidence on the manipulation of accounting numbers induced by top managers' opportunistic incentives (e.g. Teoh, Welch, and Wong 1998; Cheng and Warfield 2005; Bergstresser and Philippon 2006; Efendi, Srivastava, and Swanson 2007; Harris and Bromiley 2007; Kadan and Yang 2016). More specifically, Teoh, Welch, and Wong (1998) find that managers opportunistically manage earnings upward to affect IPO pricing. Based on a theoretical and empirical analysis, Kadan and Yang (2016) confirm that the moneyness of newly granted stock options are strongly correlated with earnings management in the vesting years.

In general, controlling shareholders of Asian firms have a huge influence over the firm's decision (Claessens, Djankov, and Lang 2000). Prior studies show that controlling shareholders engage in earnings management when they have an incentive to increase their personal benefits. For example, Kim and Yi (2006) find that controlling shareholders of Korean firms with higher control power relative to their ownership are more likely to manipulate earnings for their private benefits at the expense of other investors. Jian and Wong (2010) also report evidence that controlling shareholders of Chinese listed firms inflate earnings using abnormal related sales, and that a significant cash transfer back to controlling shareholders exists after the earnings propping.

Among the incentives of controlling shareholders to influence a firm's decisions, we focus on tax incentive to affect a firm's accounting choice in anticipation of stock gifts. There are considerably fewer empirical studies on stock gifts compared with those of earnings management. The only empirical studies addressing the stock gifts of controlling shareholders in the Korean jurisdiction include Kim and Lee (2003) and Jung and Park (2009). Kim and Lee focus on the pattern of the timing of stock gifts and the cancelation thereafter for the period of 1993–2002. During this period the valuation rule for gift-tax purposes changed twice (see Table 1 for details), and thus their findings differ depending on the sub-period they examine. In the sub-period that precedes the year 2000 the controlling shareholders of most gift firms are found to time their gifts to coincide with the date on which the stock price is perceived to be the lowest. But they subsequently cancel the gifts if the stock price further falls afterwards.⁴ By contrast, in the period of 2000–2002 the pattern of such an opportunistic behavior disappears. In particular, cancellation subsequent to a stock gift announcement becomes a rare event.

In a sense, Kim and Lee (2003) investigate a *passive* strategy of controlling shareholders who plan for stock gifts. Kim and Lee are interested in knowing whether the controlling shareholders of listed companies would *passively* wait for an opportune time to make a gift, and also whether they would subsequently cancel the gift if the gift timing becomes unfavorable after monitoring the price movement following the gift announcement. By contrast, we are interested in discovering whether controlling shareholders who plan to gift stocks would devise a more *aggressive* strategy in an attempt to mitigate the tax bites. Specifically, we examine whether the controlling shareholders *actively* manage quarterly earnings in order to depress the stock prices in the valuation period.

Jung and Park (2009) are similar to our study in the sense that they address an active strategy of controlling shareholders who plan for stock gifts: They examine whether controlling shareholders attempt to influence stock prices when they gift their stocks. But Jung and Park differ from our study in that they focus on a different means available to controlling shareholders to affect stock prices. While we focus on earnings management, Jung and Park consider a discretionary disclosure by addressing the question of whether controlling shareholders release more bad news about the firm, withhold (or delay the announcement of) more good news during the valuation period than in other periods. They indeed discover that during the valuation period, the frequency of bad news is significantly higher than in other periods, whereas the frequency of good news is considerably lower. This result suggests

that controlling shareholders seem to strategically time information disclosure to depress the stock prices in the valuation period.

In the US, stock gifts by controlling shareholders are unusual, and thus there are no related studies. However, we find a study addressing the timing of CEO stock donations. Yermack (2009) provides evidence that CEOs strategically time the donation of their stocks to family foundations to maximize income tax deductions. Specifically, they donate stocks just before a sharp decline in the share price of their company.

3.1. Hypotheses

We hypothesize that controlling shareholders tend to reduce gift taxes to deflate the level of earnings. Given that current earnings have a predictive power over future earnings, investors use the information to build a rational expectation of the future value of a firm (Stein 1989). If earnings are announced during the valuation period and are lower than the investors' expectation, stock prices during the valuation period would decrease. Studies on co-movement between stock price and earnings disclosure of Korean firms support the argument with empirical evidence (Cheon, Rho, and Bae 2004; Bae, Cheon, and Kang 2008; Baik, Kim, and Lee 2012). Because tax on gifted stock is determined based on the average market value over the valuation period, depressed stock prices would lead to a lower tax burden.

Thus, controlling shareholders would have strong incentives to report lower accounting earnings to suppress the stock prices during the valuation period for gift-tax purposes. We propose the following hypothesis in an alternative form:

Hypothesis 1: In planning for stock gifts, controlling shareholders of listed firms decrease accounting earnings reported to the market in an attempt to lower the average stock price during the valuation period.

In general, stock gifts are offered to individuals who are related parties of the controlling shareholders. Conversely, stocks could be donated to charities and non-profit organizations, which act is not subject to gift taxes.⁵ Hence, controlling shareholders who bequeath their stocks to such institutions would not have an incentive to manage earnings to influence stock prices. To support our prior hypothesis, we examine whether this conjecture is empirically substantiated. We test the following hypothesis in an alternative form:

Hypothesis 2: The income-decreasing earnings management is more likely for stock gifts given to individuals who are related parties of the controlling shareholders than those given to institutions.

4. Sample and research design

4.1. Sample selection

We select our sample from among the companies that transferred stocks by gift (hereafter, gift firms) during the period stretching from the first quarter of 2000 to the fourth quarter of 2014. The choice of 2000 as the starting year of the sample period makes sense because the current stock valuation rule for gift-tax purposes has been in effect since 2000. Further, the quarterly financial data that are needed for our study have only been publicly available since 2000.

The sample firms are subject to the following common data availability conditions. First, information on financial data and stock prices is available in the KIS-VALUE of the Korea Information Service, the TS 2000 of the Korea Listed Companies Association, and the stock database of the Korea Securities Research Institute (KSRI). Second, information regarding stock gifts is available in the KIND system (Korea Investor's Network for Disclosure System). Companies that had stock gift transactions but have since been delisted are included to avoid the problem of survivorship bias. For comparison purposes, we include stock gifts made to institutions, such as charities and non-profit organizations because those institutions are not subject to gift taxes. The final sample consists of 423 stock gift

transactions involving 229 firms. Among 423 gift transactions, 312 (111) gifts have been made to the individuals (institutions).

Panel A of Table 2 shows the quarterly distribution of the frequency of gift transactions, together with the time-series level of KOSPI Composite index (Korean stock market index) for the sample period. The number of stock gifts seems evenly distributed throughout the entire sample period despite the slightly higher frequency appearing during the time of the global financial crisis (2007 and 2008). Figure 1 graphically depicts the quarterly distribution of stock gifts in terms of the number of the gift transactions over the sample period. Such distribution is drawn as overlapping with the stock market movement. Notably, the distribution of the number of stock gifts is not concentrated in a specific period. Stock gifts are not concentrated in the bear market.⁶ Overall, stock gift transactions occur regularly throughout the period. Panel A of Table 2 and Figure 1 indicates that stock gift transactions fail to occur systematically in times of stock market distress. This observation fails to support a casual intuition that controlling shareholders will time their stock gifts to coincide with bear markets, thereby increasing their tendency to employ a more aggressive option than passively waiting for an opportune time to gift stocks. Panel B of Table 2 shows that our stock gift sample is not significantly concentrated in any specific industry.

4.2. Earnings management and discretionary accruals

Following the earnings management literature, we use discretionary accruals to investigate the incentives of controlling shareholders. *Discretionary accruals (DAC)* is known to be strongly correlated with ROA, which may lead to a performance-related bias (Dechow, Sloan, and Sweeney 1995; Kothari, Leone, and Wasley 2005). To control for this potential bias, we calculate DAC from the performance-adjusted modified Jones model (Kothari, Leone, and Wasley 2005).⁷ Therefore, we estimate Equation (1) by industry and quarter, and calculate the performance-adjusted discretionary accruals (*ADJDAC*) for each of the entire firm-quarters available in our sample period.⁸ These firm-quarters include both gift firms and non-gift firms.

$$\begin{aligned} TA_{i,t}/A_{i,t-1} = & \alpha_0(1/A_{i,t-1}) + \alpha_1(\Delta REV_{i,t} - \Delta AR_{i,t})/A_{i,t-1} \\ & + \alpha_2 PPE_{i,t}/A_{i,t-1} + \alpha_3 QTR4_{i,t} + \alpha_4 ROA_{i,t} + \varepsilon_{i,t} \end{aligned} \quad (1)$$

Where $TA_{i,t}$ = Total accruals, estimated by $NI_t - CFO_t$ for firm i in quarter t , where CFO_t is cash flows from operations; $REV_{i,t}$ = Change in net sales; $AR_{i,t}$ = Change in accounts receivables; $PPE_{i,t}$ = Gross property, plant and equipment excluding land; $A_{i,t-1}$ = Total assets at the beginning of a quarter; $QTR_{i,t}^{10} = 1$ if quarter t is the fourth fiscal quarter, and 0 otherwise; $ROA_{i,t}$ = Return on assets.

4.3. Empirical models

4.3.1. Regression model for earnings management

To test our hypotheses, we run a regression on the sample of gift firms. The sample consists of the *ADJDAC* observations both for the quarters in which earnings management is likely to occur and for the quarters in which it is unlikely. It is noteworthy that our test design is effective in addressing the selection bias because it enables us to compare the level of earnings management for different quarters within the firms that have at least one gift transaction throughout the sample period. Using an indicator variable *GIFT*, we can observe the effect of the gift transaction on discretionary accruals for the gift-quarters, the quarters related to the gift transactions. Because we compare the gift-quarters – the treatment group, against the non-gift quarters – the control group, we are analyzing the same set of firms and thus control for problems arising from comparing different firms.

Equation (2) is the regression model constructed to test hypothesis 1. The dependent variable is the performance-adjusted discretionary accruals (*ADJDAC*). The *GIFT* dummy variable is the independent variable of primary interest, and several control variables are also included as independent variables.

Table 2. Descriptive statistics for the stock gift transaction sample.

Panel A: KOSPI index and the distribution of the number of gift transactions

	No. of gift transactions			KOSPI index
	Individuals	Institutions	Quarter total	
2000. 1Q	6	0	6	910
2000. 2Q	7	0	7	765
2000. 3Q	4	0	4	716
2000. 4Q	5	1	6	540
2001. 1Q	4	2	6	573
2001. 2Q	3	0	3	579
2001. 3Q	5	0	5	543
2001. 4Q	2	1	3	597
2002. 1Q	4	0	4	792
2002. 2Q	5	0	5	843
2002. 3Q	7	3	10	724
2002. 4Q	7	4	11	673
2003. 1Q	4	0	4	591
2003. 2Q	2	0	2	620
2003. 3Q	5	4	9	725
2003. 4Q	9	0	9	782
2004. 1Q	2	2	4	864
2004. 2Q	5	1	6	825
2004. 3Q	5	0	5	782
2004. 4Q	5	2	7	862
2005. 1Q	4	1	5	952
2005. 2Q	3	4	7	962
2005. 3Q	3	0	3	1110
2005. 4Q	4	0	4	1262
2006. 1Q	0	2	2	1351
2006. 2Q	4	1	5	1350
2006. 3Q	8	2	10	1317
2006. 4Q	8	1	9	1393
2007. 1Q	6	1	7	1414
2007. 2Q	4	2	6	1627
2007. 3Q	11	3	14	1867
2007. 4Q	6	12	18	1947
2008. 1Q	8	3	11	1692
2008. 2Q	9	3	12	1793
2008. 3Q	0	4	4	1519
2008. 4Q	8	7	15	1132
2009. 1Q	2	1	3	1145
2009. 2Q	1	2	3	1371
2009. 3Q	1	1	2	1564
2009. 4Q	4	4	8	1620
2010. 1Q	0	0	0	1650
2010. 2Q	5	1	6	1692
2010. 3Q	5	2	7	1767
2010. 4Q	5	3	8	1940
2011. 1Q	6	3	9	2034
2011. 2Q	9	4	13	2116
2011. 3Q	11	4	15	1938
2011. 4Q	13	2	15	1850
2012. 1Q	11	3	14	1974
2012. 2Q	12	1	13	1910
2012. 3Q	2	2	4	1900
2012. 4Q	3	3	6	1938
2013. 1Q	7	0	7	1986
2013. 2Q	3	2	5	1934
2013. 3Q	6	1	7	1913
2013. 4Q	6	1	7	2010
2014. 1Q	7	0	7	1946
2014. 2Q	2	2	4	1993
2014. 3Q	1	1	2	2041
2014. 4Q	8	2	10	1948
Total	312	111	423	

(Continued)

Table 2. (Continued).

Panel B: Distribution of sample gift transactions by industry

Code	Industry description	No. of transactions	Percent (%)
3	Fishing	7	1.7
10	Food products	20	4.7
11	Beverages	2	0.5
13	Textiles, except apparel	7	1.7
14	Wearing apparel, clothing accessories and fur articles	7	1.7
16	Wood products of wood and cork	1	0.2
17	Pulp, paper and paper products	5	1.2
19	Coke, hard-coal and lignite fuel briquettes and refined petroleum products	2	0.5
20	Chemicals and chemical products	59	13
21	Pharmaceuticals, medicinal chemicals and botanical products	23	5.4
22	Rubber and plastic products	7	1.7
23	Other non-metallic mineral products	17	4.0
24	Basic metal products	32	7.6
26	Electronic components, computer, radio, television and communication equipment and apparatuses	11	2.6
27	Medical, precision and optical instruments, watches and clocks	2	0.5
28	Electrical equipment	9	2.1
29	Other machinery and equipment	15	3.5
30	Motor vehicles, trailers and semitrailers	20	4.7
31	Other transport equipment	2	0.5
32	Furniture	9	2.1
35	Electricity, gas, steam and air conditioning supply	12	2.8
41	General construction	25	5.9
46	Wholesale trade and commission trade, except of motor vehicles and motorcycles	29	6.9
47	Retail trade	12	2.8
49	Land transport; transport via pipelines	3	0.7
51	Air transport	2	0.5
52	Storage and support activities for transportation	5	1.2
58	Publishing activities	3	0.7
59	Motion picture, video and television program production, sound recording and music publishing activities	3	0.7
61	Telecommunications	1	0.2
62	Computer programming, consultancy and related activities	2	0.5
69	Renting and leasing; except real estate	1	0.2
71	Professional services	66	15.6
72	Architectural, engineering and other scientific technical services	1	0.2
85	Education	1	0.2
Total		423	100.00

Notes: KOSPI composite index: Quarterly average; KRX Industry code.

The level of discretionary accruals may be substantially different across firms and time. Therefore, we also control for the firm fixed effect and the quarter fixed effect.

$$\begin{aligned} \text{ADJDAC}_{i,t} = & \alpha + \beta_1 \text{GIFT}_{i,t} + \beta_2 \text{OWN}_{i,t} + \beta_3 \text{LEV}_{i,t} + \beta_4 \text{CFO}_{i,t} + \beta_5 \text{SIZE}_{i,t} + \beta_6 \text{TA}_{i,t-1} \\ & + \beta_7 \text{GRW}_{i,t} + \beta_8 \text{LOSS}_{i,t-1} + \text{firm indicators} + \text{Quarter indicators} + \varepsilon_{i,t} \end{aligned} \quad (2)$$

where for firm i ,

Dependent variables

ADJDAC_{it} = Performance-adjusted discretionary accruals.

Test variable

GIFT_{it} = A dummy variable that equals 1 for firms in the quarter in which the valuation period begins (Q_0) or in the one immediately preceding Q_0 (Q_{-1}), and 0 otherwise.

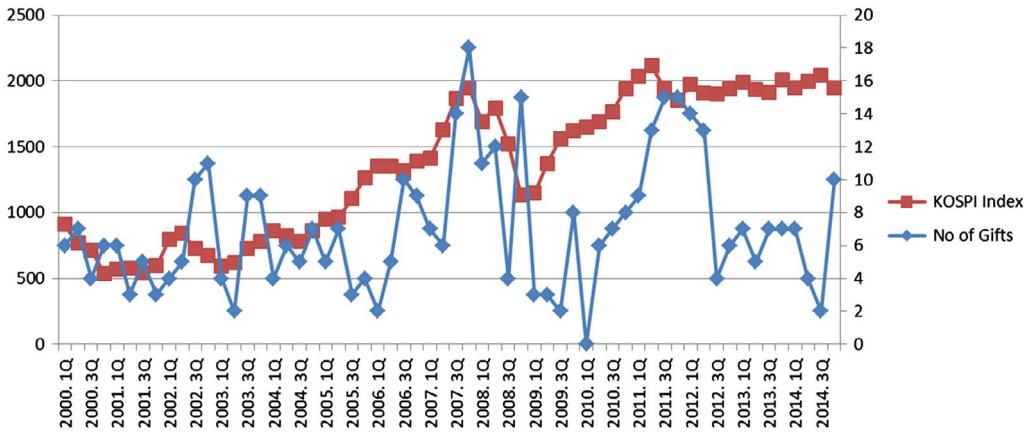


Figure 1. KOSPI composite index and the distribution of stock gifts during 2000.1Q–2014.4Q.
 Notes: The left vertical axis represents the quarterly average of KOSPI Composite Index; the right vertical axis represents the number of gift transactions during a quarter.

Quarter	Q ₋₂	Q ₋₁	Q ₀		Q ₊₁	Q ₊₂
			Valuation Period			
<i>GIFT Dummy</i>	0 (NEM Quarter)	1 (EM Quarter)	1 (EM Quarter)	0 (NEM Quarter)	0 (NEM Quarter)	0 (NEM Quarter)

Figure 2-1. The coding of GIFT dummy.
 Notes: The variable is defined as follows: *GIFT* = a dummy variable that equals 1 for firms in the quarter in which the valuation period begins (Q₀) or in the one immediately preceding Q₀ (Q₋₁), and 0 otherwise.

Quarter	Q ₋₂	Q ₋₁	Q ₀	Q ₊₁		Q ₊₂
				Valuation Period		
<i>GIFT Dummy</i>	0 (NEM Quarter)	1 (EM Quarter)	1 (EM Quarter)	0 (NEM Quarter)	0 (NEM Quarter)	0 (NEM Quarter)

Figure 2-2. The coding of GIFT dummy.
 Note: See Figure 2-1 for variable definitions.

Control variables

- OWN_{it} = Ownership interest of the largest shareholder and related parties combined together.
- LEV_{it} = Leverage: the firm's debt-asset ratio.
- CFO_{it} = Operating cash flows scaled by lagged assets.
- SIZE_{it} = Firm size: the natural logarithm of total assets.
- TA_{it-1} = Total accruals in quarter *t*-1 estimated by NI_{t-1} - CFO_{t-1}, then scaled by lagged assets.
- GRW_{it} = Quarterly growth in net assets.
- LOSS_{it-1} = Dummy variable that takes the value of 1 if the firm reports net loss in the fiscal quarter *t*-1, and 0 otherwise.

In Equation (2) the independent variable of primary interest is *GIFT*, which is a dummy variable coded as follows. Because the valuation period is four months, while a quarter is three months, it may stretch across two consecutive quarters as shown in Figure 2-1 or three consecutive quarters as in the case of Figure 2-2. If the hypothesis is correct, earnings management will take place in the quarter in

which the valuation period begins. Let us denote this particular quarter by Q_0 . It is not clear, however, whether earnings management will also take place in the quarter immediately before the valuation period (denoted by Q_{-1}) and the quarter immediately after (denoted by Q_{+1}).

Let us first consider the situation in which the valuation period stretches across two consecutive quarters (see Figure 2-1). It is apparent that earnings management in Q_{+1} is of no use because the valuation period ends even before the earnings for the quarter are announced, perhaps in Q_{+2} . Therefore, controlling shareholders are not expected to manage earnings in Q_{+1} . In contrast, the earnings for Q_{-1} will be released usually in the 30–45 days after the quarter ends, and thus are very likely to affect stock prices during the valuation period.¹¹ Therefore, we can expect controlling shareholders to engage in earnings management in Q_{-1} . Accordingly, we set the *GIFT* variable equal to 1 if a firm is in Q_0 or Q_{-1} , but equal to 0 otherwise.

Turning to the situation in which the valuation period stretches across three consecutive quarters (see Figure 2-2), we can expect that the Q_{+1} earnings will not be subjected to earnings management by controlling shareholders even if the quarter completely overlaps with the valuation period. The reason is that quarterly earnings are usually announced within 30–45 days after a quarter ends, and therefore the valuation period will cease even before the Q_{+1} earnings are released. As for the Q_{-1} earnings, at first they do not appear to be subjected to earnings management because the quarter is at least 60 days (but not more than 90 days) away from the start of the valuation period. But because the Q_{-1} earnings are expected to be announced 30–45 days after the quarter ends, there is a time lag, which ranges from 15 to 60 days, between the earnings announcement and the inception of the valuation period. In the Korean stock market, post-earnings announcement drifts (PEAD) for quarterly earnings are observed mostly for 60 days but for up to 90 days (Nah 2008). In consideration of the PEAD, we can expect that the announcement effect of the Q_{-1} earnings will persist in an earlier phase of the valuation period. Thus, it is reasonable to presume that the Q_{-1} earnings are also subjected to earnings management by controlling shareholders. Accordingly, our coding method for the *GIFT* variable remains the same, regardless of which case a particular firm is in. Controlling shareholders who plan for stock gifts will manage earnings so that reported earnings are reduced by decreasing discretionary accruals. Therefore, we expect the coefficient of the *GIFT* variable to be negative.

The control variables included in Equation (2) are those known to affect discretionary accruals. First, we include a *SIZE* variable because large companies have incentives to reduce earnings to mitigate political cost (Watts and Zimmerman 1986). We also add a leverage variable (*LEV*) for the following two countervailing reasons. DeFond and Jiambalvo (1994) find that a manager with high debt ratio has an incentive to increase earnings to avoid contractual costs. However, Ashbaugh, LaFond, and Mayhew (2003) discover that the debt ratio has a negative relationship with the level of earnings management. We further include the *CFO* variable on the basis of the research finding that even if there is no actual earnings management, a company with good operating performance has an inclination to show negative discretionary accruals, whereas a company with bad result tends to have positive discretionary accruals (Dechow, Sloan, and Sweeney 1995, 1996). The *LOSS* variable is included to control for the effect of firm performance in the previous quarter (Kasznik 1999).

In addition, the ownership interest of the largest shareholder and related parties (*OWN*) is added to control for the influence of ownership concentration on earnings management (Lee and Lee 2003; Jeon, Choi, and Park 2004). Further, total accruals of the previous quarter (*TA*) are also included to control the reversal effect of accruals on a timely basis (Song and Choi 2001). Finally, the growth rate of total assets (*GRW*) is added because the higher the growth rate is, the greater incentives managers have for earnings management (Ashbaugh, LaFond, and Mayhew 2003; Myers, Myers, and Omer 2003; Yoon 2005).

To examine whether the incentive for earnings management diverges on the relation between the donor and the donee of stock gifts, we split the full sample into two sub-samples, depending on the type of the donee (either individuals or institutions) to whom the stock gift is made to and separately run regressions. The sample labeled 'Individuals' includes firm-year observations of discretionary accruals (ADJDAC) of the firms whose controlling shareholder gifted the stocks of the firm to the

Table 3. Descriptive statistics for variables.

Panel A: Full sample ($n = 8879$)					
Variable	Mean	Std. dev.	Q1	Median	Q3
EM quarters					
ADJDAC	-0.0028	0.0331	-0.0224	-0.0026	0.0153
OWN	0.4582	0.1499	0.3574	0.4564	0.5774
LEV	0.3950	0.1820	0.2466	0.3853	0.5220
CFO	0.0130	0.0363	-0.0054	0.0126	0.0327
SIZE	26.5805	1.3499	25.6106	26.2534	27.3894
TA_LAG	0.0000	0.0356	-0.0191	-0.0017	0.0193
GRW	0.0246	0.0874	-0.0124	0.0121	0.0449
LOSS	0.1569	0.3640	0.0000	0.0000	0.0000
NEM quarters					
ADJDAC	-0.0021	0.0345	-0.0201	-0.0020	0.0150
OWN	0.4371	0.1502	0.3274	0.4410	0.5433
LEV	0.4180	0.1945	0.2628	0.4081	0.5576
CFO	0.0132	0.0377	-0.0058	0.0123	0.0321
SIZE	26.6782	1.4080	25.6594	26.4151	27.5077
TA_LAG	-0.0036	0.0438	-0.0224	-0.0025	0.0170
GRW	0.0171	0.1061	-0.0158	0.0119	0.0433
LOSS	0.2074	0.4055	0.0000	0.0000	0.0000
Note: Earnings management quarters (EM quarters) ($n = 650$) and Non-earnings management quarters (NEM quarters) ($n = 8229$) for full sample.					
Panel B: Individuals ($n = 5876$)					
Variable	Mean	Std. dev.	Q1	Median	Q3
EM quarters					
ADJDAC	-0.0029	0.0323	-0.0229	-0.0021	0.0147
OWN	0.4662	0.1353	0.3684	0.4575	0.5784
LEV	0.3983	0.1687	0.2613	0.3879	0.5061
CFO	0.0125	0.0349	-0.0064	0.0121	0.0329
SIZE	26.2825	1.1212	25.4835	26.1258	26.9629
TA_LAG	0.0000	0.0361	-0.0197	-0.0024	0.0195
GRW	0.0188	0.0636	-0.0127	0.0105	0.0415
LOSS	0.1547	0.3620	0.0000	0.0000	0.0000
NEM quarters					
ADJDAC	-0.0017	0.0326	-0.0200	-0.0016	0.0157
OWN	0.4434	0.1374	0.3416	0.4414	0.5448
LEV	0.4110	0.1712	0.2735	0.4116	0.5336
CFO	0.0128	0.0350	-0.0067	0.0120	0.0325
SIZE	26.3698	1.1802	25.5048	26.2235	27.0618
TA_LAG	-0.0029	0.0376	-0.0222	-0.0023	0.0173
GRW	0.0147	0.0587	-0.0169	0.0111	0.0418
LOSS	0.2018	0.4014	0.0000	0.0000	0.0000
Note: Earnings management quarters (EM quarters) ($n = 459$) and Non-earnings management quarters (NEM quarters) ($n = 5417$) for individual sample.					
Panel C: Institutions ($n = 3003$)					
Variable	Mean	Std. dev.	Q1	Median	Q3
EM quarters					
ADJDAC	-0.0026	0.0350	-0.0224	-0.0033	0.0182
OWN	0.4390	0.1792	0.3044	0.4363	0.5509
LEV	0.3870	0.2108	0.2008	0.3719	0.5416
CFO	0.0142	0.0397	-0.0048	0.0143	0.0326
SIZE	27.2965	1.5700	26.1171	27.0630	28.3636
TA_LAG	0.0000	0.0344	-0.0178	-0.0010	0.0167
GRW	0.0387	0.1267	-0.0112	0.0185	0.0549
LOSS	0.1623	0.3697	0.0000	0.0000	0.0000
NEM quarters					
ADJDAC	-0.0027	0.0377	-0.0202	-0.0027	0.0136
OWN	0.4250	0.1717	0.3011	0.4405	0.5360
LEV	0.4315	0.2323	0.2403	0.3950	0.6088
CFO	0.0140	0.0423	-0.0043	0.0129	0.0317
SIZE	27.2721	1.6070	26.0441	27.0657	28.4132
TA_LAG	-0.0048	0.0537	-0.0226	-0.0030	0.0165

(Continued)

Table 3. (Continued).

Panel C: Institutions (n = 3003)					
GRW	0.0218	0.1621	-0.0143	0.0136	0.0448
LOSS	0.2183	0.4132	0.0000	0.0000	0.0000

Note: Earnings management quarters (EM quarters) (n = 191) and Non-earnings management quarters (NEM quarters) (n = 2812) for institutions sample.

Notes: The variables are defined as follows: *ADJDAC* = the performance-adjusted discretionary accruals in quarter *t* divided by the lagged total assets; *GIFT* = a dummy variable that equals 1 for firms in the quarter in which the valuation period begins (Q_0) or in the one immediately preceding Q_0 (Q_{-1}), and 0 otherwise; *OWN* = largest shareholder ownership: the proportion of common shares held by the largest shareholder and his/her related party at the end of the fiscal year *t*; *LEV* = leverage: the firm's debt-equity ratio at the end of the fiscal quarter *t*, measured as total liabilities divided by total assets; *CFO* = cash flows: operating cash flows, measured as the difference between operating income and total accruals in quarter *t* scaled by the lagged total assets; *SIZE* = firm size: the natural logarithm of the firm's total assets as identified in the period *t* quarterly report; *TA_LAG* = total accruals: the total accruals in quarter t_{-1} estimated by $NI_{t-1} - CFO_{t-1}$; *GRW* = growth: one quarter growth in net assets; *LOSS* = loss incurrence: a dummy variable equal to 1 if the firms report net loss in the fiscal quarter t_{-1} , and 0 otherwise.

individuals having a close relationship with those controlling shareholders. Another set of sample labeled 'Institutions' includes discretionary accruals (*ADJDAC*) of the firms whose controlling shareholders donated their stocks to institutions. Apart from level analysis, we also conduct a re-run of regression with first-differenced variables as shown in Equation (3). This process was adopted to address endogeneity issues related to correlated omitted variables.

$$\begin{aligned} \Delta ADJDAC_{i,t} = & \alpha + \beta_1 GIFT_{i,t} + \beta_2 \Delta OWN_{i,t} + \beta_3 \Delta LEV_{i,t} + \beta_4 \Delta CFO_{i,t} + \beta_5 \Delta SIZE_{i,t} \\ & + \beta_6 \Delta TA_{i,t-1} + \beta_7 \Delta GRW_{i,t} + \text{firm indicators} \\ & + \text{Quarter indicators} + \varepsilon_{i,t} \end{aligned} \quad (3)$$

5. Results

5.1. Descriptive statistics

Table 3 presents the descriptive statistics for the variables in Equation (2) for 'EM quarters' and 'NEM quarters'. 'EM quarters' are the two quarters in which earnings management is expected to occur (i.e. Q_{-1} and Q_0). The quarters labeled 'NEM quarters' are the quarters other than the EM quarters (i.e. the quarters for which the *GIFT* dummy takes the value of 0). Panel A, Panel B, and Panel C are for 'Full', 'Individuals', and 'Institutions' sample, respectively.

For the 'full' sample in Panel A, mean (median) *ADJDAC* is -0.0028 (-0.0026) and -0.0021 (-0.0020) for EM and NEM quarters, respectively. *ADJDAC* for EM quarters is lower than *ADJDAC* for NEM quarters, which indicates that the discretionary portion of accruals is lower for EM quarters once controlled for firm performance. This difference in the level of *ADJDAC* is higher for the 'Individuals' sample in Panel B. Mean *ADJDAC* is -0.0029 and -0.0017 for EM and NEM quarters, respectively. However, the difference is only marginal for the 'Institutions' sample. In Panel C, mean *ADJDAC* is -0.0026 and -0.0027 for EM and NEM quarters, respectively. These results are consistent with our hypotheses regarding the earnings management incentives of controlling shareholders planning for stock gifts. As predicted in hypothesis 2, the significantly lower discretionary accruals during the EM quarters relative to NEM quarters are only observed for stock gifts to individuals who are related parties of controlling shareholders.

5.2. Empirical results

Columns (1)–(3) in Table 4 show the results from the regression of *ADJDAC* on stock gifts.¹² Columns (1), (2), and (3) are results for the 'Full', 'Individuals', and 'Institutions' sample, respectively. The coefficients of the *GIFT* variable in Columns (1) and (2) are negative and statistically significant, which support our hypothesis 1 that controlling shareholders would manage earnings in anticipation of stock gift transactions. Furthermore, a comparison of the *GIFT* coefficients in Columns (2) and (3) shows that the significant results come only from the 'Individuals' sample not from 'Institutions.' This result is

Table 4. Regression results for Equation (2).
$$ADJDAC_{i,t} = \alpha + \beta_1 GIFT_{i,t} + \beta_2 OWN_{i,t} + \beta_3 LEV_{i,t} + \beta_4 CFO_{i,t} + \beta_5 SIZE_{i,t} + \beta_6 TA_{i,t-1} + \beta_7 GRW_{i,t} + \beta_8 LOSS_{i,t-1} + \text{firm indicators} + \text{Quarter indicators} + \varepsilon_{i,t} \quad (2)$$

Variables	Predicted Sign	Full (1)	Individuals (2)	Institutions (3)
Intercept		0.0394** (0.036)	0.0431* (0.070)	0.0304 (0.337)
GIFT	-	-0.0013* (0.062)	-0.0023*** (0.002)	0.0014 (0.351)
OWN	+	-0.0056** (0.027)	-0.0082** (0.014)	0.0008 (0.863)
LEV	?	0.0076*** (0.001)	0.0006 (0.817)	0.0159*** (0.000)
CFO	-	-0.8124*** (0.000)	-0.8380*** (0.000)	-0.7727*** (0.000)
SIZE	?	-0.0014* (0.060)	-0.0014 (0.131)	-0.0010 (0.417)
TA _{t-1}	-	0.0045 (0.314)	-0.0190*** (0.001)	0.0283*** (0.000)
GRW	+	0.0085*** (0.000)	0.0424*** (0.000)	-0.0009 (0.689)
LOSS _{t-1}	-	-0.0008 (0.121)	-0.0016*** (0.007)	0.0001 (0.907)
Firm fixed		Included	Included	Included
Quarter fixed		Included	Included	Included
Observations		8,879	5,876	3,003
R2_adjusted		0.755	0.784	0.732

Notes: Coefficients on firm and quarter dummies are suppressed. Variables are defined in Table 3. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 level (all two-tailed test), respectively. *P*-values are in parentheses.

consistent with the hypothesis 2 that the earnings management incentives of controlling shareholders only appear in the stock gift transactions related to gift taxes.

The coefficients of all control variables except *SIZE* and *OWN* are signed as expected and are significant. The coefficient of *CFO* is negative and highly significant, which is consistent with the previous findings (Dechow, Sloan, and Sweeney 1995) that operating cash flows have a systemic negative correlation with discretionary accruals. The coefficient of *GRW* is positive and significant, implying that the manager of a firm with high growth potential has an incentive to manage earnings upward (Yoon 2005).

As it is previously mentioned, we also run regressions with change variables (quarter to quarter change) to address the problem of correlated omitted variables. Table 5 presents the results. Compared with the results in Table 4, most of the control variables except for '*ΔOWN*' are more statistically significant, which means that they work more efficiently as controls. In spite of employing more efficient control variables, the GIFT coefficient for 'Individuals' sample in column (2) of Table 5 still remains significant, showing a greater decrease in ADJDAC for the EM quarters relative to the NEM quarters. The results are consistent with the results in Table 4 that significant results come only from the 'Individuals' sample, not from 'Institutions.' Overall, Tables 4 and 5 present evidence of income-decreasing earnings management in the quarters preceding and/or overlapping the valuation period in an effort to adversely affect stock price of the valuation period, thereby supporting the hypothesis 1. Furthermore, consistent with the hypothesis 2, income-decreasing management appears only for stock gifts to individuals who are related parties of controlling shareholders.

5.3. Propensity score matching (PSM)

To reduce the selection bias which originates from the dissimilarity between the treatment group and the control group, we mainly use self-controlled tests in the paper, which compares the level of discretionary accruals of the gift-quarters of gift firms with that of the non-gift quarters of the same firms. To address further endogeneity issues, we use the first differenced regression (Equation (3)). To provide more robustness to the results, we also run a regression using a matching technique, Propensity score matching (PSM) (Rosenbaum and Rubin 1983). Matching procedure is as follows: First, we calculate PSM scores for all quarters of all listed firms over the sample period from a logit regression model.¹³ Then, we, for each gift quarter (treated subject), find a non-gift quarter (control subject) with the closest propensity score, employing nearest available matching on the estimated propensity score.¹⁴

Table 5. Regression results for Equation (3).
$$\Delta \text{ADJDAC}_{i,t} = \alpha + \beta_1 \text{GIFT}_{i,t} + \beta_2 \Delta \text{OWN}_{i,t} + \beta_3 \Delta \text{LEV}_{i,t} + \beta_4 \Delta \text{CFO}_{i,t} + \beta_5 \Delta \text{SIZE}_{i,t} + \beta_6 \Delta \text{TA}_{i,t-1} + \beta_7 \Delta \text{GRW}_{i,t} + \text{firm indicators} + \text{Quarter indicators} + \varepsilon_{i,t} \quad (3)$$

Variables	Predicted Sign	Full (1)	Individuals (2)	Institutions (3)
Intercept		0.0135*** (0.001)	0.0144*** (0.002)	0.0208* (0.058)
GIFT	-	-0.0014 (0.188)	-0.0028** (0.014)	0.0014 (0.527)
Δ OWN	+	0.0082 (0.335)	0.0033 (0.764)	0.0109 (0.468)
Δ LEV	?	0.0109 (0.166)	-0.0382*** (0.001)	0.0353*** (0.003)
Δ CFO	-	-0.7986*** (0.000)	-0.8405*** (0.000)	-0.7462*** (0.000)
Δ SIZE	?	0.0168*** (0.001)	0.0306*** (0.000)	0.0087 (0.242)
Δ TA _{t-1}	-	-0.0177*** (0.000)	-0.0286*** (0.000)	-0.0017 (0.824)
Δ GRW	+	0.0261*** (0.000)	0.0413*** (0.000)	0.0165*** (0.002)
Firm fixed		Included	Included	Included
Quarter fixed		Included	Included	Included
Observations		8,641	5,718	2,923
R2_adjusted		0.759	0.792	0.722

Notes: Coefficients on firm and quarter dummies are suppressed. Variables are defined in Table 3. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 level (all two-tailed test), respectively. *P*-values are in parentheses.

Table 6. Regression results for Equation (2) with PSM sample.
$$\text{ADJDAC}_{i,t} = \alpha + \beta_1 \text{GIFT}_{i,t} + \beta_2 \text{OWN}_{i,t} + \beta_3 \text{LEV}_{i,t} + \beta_4 \text{CFO}_{i,t} + \beta_5 \text{SIZE}_{i,t} + \beta_6 \text{TA}_{i,t-1} + \beta_7 \text{GRW}_{i,t} + \beta_8 \text{LOSS}_{i,t-1} + \text{firm indicators} + \text{Quarter indicators} + \varepsilon_{i,t} \quad (2)$$

Variables	Predicted Sign	Full (1)	Individuals (2)	Institutions (3)
Intercept		0.0488 (0.457)	0.0836 (0.259)	0.1550 (0.240)
GIFT	-	-0.0020* (0.067)	-0.0030** (0.013)	0.0012 (0.583)
OWN	+	-0.0104 (0.237)	0.0003 (0.980)	-0.0002 (0.990)
LEV	?	-0.0042 (0.596)	-0.0039 (0.647)	0.0341* (0.069)
CFO	-	-0.8492*** (0.000)	-0.8313*** (0.000)	-0.7130*** (0.000)
SIZE	?	-0.0012 (0.649)	-0.0028 (0.324)	-0.0061 (0.241)
TA _{t-1}	-	0.0053 (0.733)	-0.0289* (0.095)	0.0354 (0.276)
GRW	+	0.0185** (0.013)	0.0264** (0.013)	-0.0178 (0.131)
LOSS _{t-1}	-	-0.0014 (0.416)	-0.0036* (0.052)	-0.0025 (0.519)
Firm fixed		Included	Included	Included
Quarter fixed		Included	Included	Included
Observations		1,300	916	382
R2_adjusted		0.760	0.758	0.726

Notes: Coefficients on firm and quarter dummies are suppressed. Variables are defined in Table 3. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 level (all two-tailed test), respectively. *P*-values are in parentheses.

Through this process, we obtain a non-gift control sample that has a similar predicted probability of having a gift transaction. As a result, PSM produces a matched sample of 650 control firm-quarter observations, providing a combined sample of 1300 firm-quarter observations. Table 6 shows the regression results from Equation (2), using the PSM sample. Consistent with the results from Table 5, the coefficient of interest (*GIFT*) is negative and significant for the 'Full' sample and the 'Individuals' sample. Therefore, we find that the PSM results are also consistent with our hypotheses.

6. Conclusion

It is well known that controlling shareholders of most Korean companies transfer their corporate ownership to the next generation via stock gifts. In this paper, we examine whether controlling shareholders who plan for stock gifts would manage earnings in an attempt to influence stock prices prior to gifting stocks to related parties. Because gift taxes are levied on the basis of the *average* market value of the stock transferred for a certain period known as the *valuation period*, the controlling shareholders may

be incentivized to depress stock prices during this period to alleviate the tax burden. We specifically hypothesize that controlling shareholders will engage in earnings management in the quarters that precede and/or overlap with the valuation period in an effort to adversely affect stock price. To test this hypothesis, we analyze a sample of 423 gift transactions in which controlling shareholders transferred stocks as gifts during the time of 2000–2014. We discover that the companies of these controlling shareholders significantly decrease discretionary accruals in the quarters that precede and/or overlap with the valuation period, compared with those of other quarters. Furthermore, the income-decreasing earnings management is found significant when stock gifts are made to individuals who are related parties and family members of controlling shareholders. This earnings-management behavior is not observed in the cases where stock gifts are donated to institutional donees not subject to gift taxes.

This study expands the scope of earnings-management literature by providing empirical evidence of tax-motivated earnings management by controlling shareholders. This study specifically shows that controlling shareholders planning for stock gifts have incentives to decrease earnings to minimize tax costs. This study also provides important implications to policy-makers, tax authorities, and social activists who are concerned of the economic or tax inequality in society. Our results indicate that rich families tend to use all available strategies, including earnings management, to minimize the cost of wealth transfer to next generations.

Notes

1. Estate and gift tax rates in Korea are as follows.

Tax base	Tax rates (%)
Less than KRW100 million	10
KRW100 million ~ 500 million	20
KRW500 million ~ 1 billion	30
KRW1 billion ~ 3 billion	40
More than KRW3 billion	50

2. China Minsheng Banking Corp. and Hurun Research Institute.
3. It is cited from an article in China Youth Daily published on 3 July 2013.
4. A stock gift can be revoked up to three months after it is announced.
5. Unlike in the US, the grantees pay gift taxes in Korea.
6. A bear market occurred in 2000, 2002, and 2008. Given the absence of any standard definition, we define 'bear market' as the period where we find consecutive negative returns of KOSPI composite index for three or more quarters.
7. We also use discretionary accruals (DAC) without performance-adjustment as an alternative dependent variable. The results remain qualitatively the same.
8. DAC is estimated cross-sectionally each quarter using all firm-quarter samples in the same one-digit KRX industry code. For industry classification, we follow the KRX sector specification.
9. For the period after 2003, total accruals are measured as the difference between net income and cash flow from operations. For the period before 2003, total accruals are measured using an indirect approach because the data on cash flow from operations in Korea are not available for most of the sample.

$$TA_{i,t} = (\Delta CA_{i,t} - \Delta CL_{i,t} - \Delta CASH_{i,t} + \Delta STDEBT_{i,t} - DEP_{i,t})$$
 where $TA_{i,t}$ = total accruals, defined as Δ current assets – Δ current liabilities – Δ cash + Δ short-term debt – depreciation for firm i in quarter t .
10. We include a dummy variable for the fourth fiscal quarter because accruals in the fourth quarter may differ from accruals in the first three quarters due to increased auditor inspection and discretionary asset write-offs (Francis, Hanna, and Vincent 1996; Matsumoto 2002).
11. Listed firms in Korea are required by the Securities and Exchange Act to release their quarterly earnings within 45 days after a quarter ends. Further, Korean listed firms rarely report quarterly earnings within 30 days.
12. We have also used discretionary accruals (DAC) without performance adjustment as an alternative dependent variable. However, the results remain qualitatively the same.
13. Variables for determination model include largest shareholder ownership, size, asset growth, cash flow from operations (CFO), lagged accruals, and lagged loss indicator.
14. One to one matching with no replacement. The Caliper width used for matching is 0.05sigma. Control sample for PSM test is constructed from the listed firms that do not involve any gift transactions throughout the sample period.

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