Transferring Shares to Employees or Directors: Exploring the Effect of Board Duality on Share Repurchase in Taiwan

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Abstract

This study investigates the possible wealth transfer from non-controlling shareholders to controlling shareholders through share repurchase in Taiwan. We examine two kinds of duality problems: Cases where top management including CEO concurrently serve as members of the board (board duality), and cases where chief executive officers concurrently serve as chairmen (CEO duality). We find that firms with duality problems are more likely to announce share repurchase with the purpose of transferring shares to employees and have lower cumulative abnormal returns surrounding the announcement. Further, the presence of independent directors mitigates the negative market reaction.

Keywords: Corporate Governance, Share Repurchase, Board Duality, CEO Duality, Independent Directors

JEL Classification: G32, G34, G38

1. Introduction

The open market share repurchase has become increasingly prevalent in a large number of countries in recent years. Prior studies explain the motivation to initiate repurchase programs, by reference to theories such as the signalling hypothesis (Vermaelen, 1981; Comment & Jarrell, 1991;

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Ikenberry, Lakonishok, & Vermaelen, 1995; Hackethal & Zdantchouk, 2006), the free cash flow hypothesis (Stephens & Weisbach, 1998; Barth & Kasznik, 1999; Dittmar, 2000; Grullon & Michaely, 2002), the optimal leverage ratio hypothesis (Bagwell & Shoven, 1988; Fenn & Liang, 2001; Hovakimian, Opler, & Titman, 2001), the option funding hypothesis (Kahle, 2002) and the use of share repurchase as a takeover defense (Dittmar, 2000). Although motives underlying share repurchase are widely documented, only a very limited number of studies directly address the impact of corporate governance on share repurchase.

In Taiwan, generally, the purpose and terms of the open-market share repurchase initiatives are discussed at the firm's board level[1]. Repurchasing firms need to disclose three discrete purposes: Purpose 1 is to transfer shares to employees. Kahle (2002) finds that executive options increase the likelihood of repurchasing because dividends payments reduce the value of exercisable and unexercisable options held by managers. Therefore, firms are more likely to repurchase if managerial wealth will be negatively impacted by the payment of dividends. Option and stock grants are usually complementary tools of compensation. Like options, the target of announcing the repurchase programs with the purpose of transferring shares to employees is to reward their hard-work and boost their morale. Shares repurchased from the market can be transferred to employees over three years following the completion date of actual share repurchase. In effect, employees can choose to accept these shares and pay the average stock price when the current stock price exceeds the average repurchasing price or give them up once the current stock price drops below the average repurchasing price. Therefore, firms' transfer of shares to employees acts as a spectacular form of compensation. Purpose 2 is to fund the conversion of convertible securities and purpose 3 is to signal undervaluation in the hope of stabilising stock prices.

Meanwhile, prior studies have stopped short of exploring how directors with dual positions impact share repurchase which may be related to wealth transfer between controlling shareholders and non-controlling shareholders (Ginglinger & L'her, 2006; Hackethal & Zdantchouk, 2006). Ginglinger and L'her (2006) find that positive cumulative returns following repurchase announcements only appear for the company with a low probability of being taken over, and with a low risk of non-controlling shareholders' expropriation. Westphal and Zajac (2001) report that when a CEO extends his power over the board,

[1] The term defined includes the valid time for implementation, the number of shares targeted to be repurchased and the estimated repurchase price interval.

the implementation of repurchase programs decreases. CEO duality and board duality are two major duality problems we discuss in this paper. We consider CEO duality as a CEO concurrently serves as a board chairman and board duality as top management concurrently serves as members of the board. However, little attention has been devoted to the relationship between board duality and the distinct purpose of transferring shares to employees because the disclosure of repurchase purposes is not mandatory for most countries around the world except for Taiwan.

The first objective of this paper is to explore the relationship between share repurchase with Purpose 1 and duality problems because we expect that controlling shareholders with dual positions tend to take advantage of the repurchase. When firms initiate the repurchase program with Purpose 1, they often have good prospects in the future. The benefit/cost for shareholders could be explained as follows: First, firms pay back certain non-controlling shareholders (outside shareholders) by buying their shares. However, the good prospects in the future imply the non-controlling shareholders (outside shareholders) selling their shares lose the gain from possibly better stock price performance in the future. Second, the repurchased shares can be transferred to employees within three years in Taiwan. If controlling shareholders concurrently serve as top management and members of the board, they have the power to decide the transfer date and the number of shares repurchased. Although the regulation requires employees to pay the average repurchasing price to get the buy-back shares, employees could give up obtaining these shares if the current stock price is below the average repurchasing price. If the stock price at the transfer date exceeds the average repurchasing price, controlling shareholders with dual positions benefit from the premium. By contrast, the remaining non-controlling shareholders (usually without dual positions) could not get the premium because shares repurchased are not transferred to them. When controlling shareholders benefit from the premium of transferred shares and the extension of their control power, they have incentives to initiate a repurchase program at the board meeting. Therefore, we expect that share repurchase with the purpose of transferring shares to employees and duality problems are positively related.

Furthermore, prior studies investigate the effect of independent directors or outside directors on firm's various decisions, such as CEO removal (Weisbach, 1988), the negotiation of tender offer bids (Byrd & Hickman, 1992), resistance to greenmail payments (Kosnik, 1987), the choice of audit firm (Abbott & Parker, 2000; Beasley & Petroni, 2001), management earnings forecasts (Ajinkya, Bhojraj, & Sengupta, 2005;

Karamanou & Vafeas, 2005), financial reporting quality (Beasley, 1996; Klein, 2002), and cash dividends (Hu & Kumar, 2004). Extending from prior studies, the second objective of this paper is to explore the monitoring role of independent directors within the open market share repurchase context. We expect that market reaction to the announcement of repurchasing programs aiming at controlling shareholders' self-interest is less positive when controlling shareholders with dual positions take advantage of the repurchase decisions at the cost of non-controlling shareholders. However, independent directors positively influence the market reaction to the announcement of repurchasing programs when they help curb improper intention of controlling shareholders and guarantee the equivalent treatment for non-controlling shareholders.

Consistent with our expectations, results show that firms with CEO duality and a greater degree of board duality are more likely to initiate repurchase programs with the purpose of transferring shares to employees. We document lower cumulative abnormal returns surrounding share repurchase announcements for such firms. We also find that independent directors mitigate the negative effects of market reactions surrounding share repurchase announcements caused by CEO duality and board duality.

The remainder of this paper is presented in four sections. The next section discusses the unique traits of regulation in Taiwan as compared with other countries, and develops the research hypotheses. The third section contains the data description and methodology. Empirical results are presented in the fourth section. The final section contains concluding remarks and implications.

2. Background and hypotheses development

2.1 Share repurchase in Taiwan

As in the U.S. and Korea, open market share repurchase programs are authorised at board meetings in Taiwan, whereas such repurchase programs require the approval of the annual shareholder meeting in Japan, the U.K., Germany and France (Lee, Jung & Thornton, 2005; Park & Jung, 2005).

Repurchase programs in Taiwan are closely scrutinised by the Ministry of Finance, and the government articulates some unique and rather strict requirements, as compared with other countries around the world. The two-month period of implementing repurchase programs in Taiwan is the shortest when compared with the three-month period in

Korea, the eighteen-month period in U.K. and Germany, and the twelve-month period in Japan and Canada. The regulation in the U.S. does not even provide a definite deadline for implementing repurchase programs. In addition, the regulations in Taiwan require firms to announce repurchase programs with their corresponding specific purposes, which include transferring shares to its employees, funding the conversion of convertible securities, and signalling undervaluation (Chen, Chen, & Cheng, 2004; Chang, Lai & Yu, 2005). On the other hand, share repurchase in the U.S. generally is not confined to any specific purpose. Chen et al. (2004) mentioned that in order to avoid large shareholders manipulating the stock price via repeatedly buying back and selling out a firm's shares, the shares purchased for Purpose 3 have to be cancelled within six months. Shares repurchased for Purpose 1 shall be transferred within three years from the date of the buyback. Repurchased shares can not be reissued by the firm and require that an amended registration be processed. By contrast, firms in the U.S. and Korea can reissue the repurchased shares in the market.

In summary, the special environment in Taiwan provides an opportunity for us to investigate the possible agency problem of CEO duality and board duality, without other confounding noise within the context of share repurchase for the purpose of transferring shares to employees.

2.2 Literature survey and hypotheses development

Prior studies suggest CEO duality increases the information asymmetry between controlling shareholders and non-controlling shareholders, intensifying the conflict between them. Prior studies also suggest that the board may be ineffective in performing its key functions, such as evaluating and firing CEOs (Jensen, 1993). Similarly, Fama and Jensen (1983) indicate that giving one individual both decision-management and decision-control power reduces a board's effectiveness in monitoring a CEO. CEO duality is an opportunity to expand the CEO's self-interest. On the contrary, the absence of CEO duality enables a firm's business to being monitored by all board members.

From the managerial entrenchment perspective, prior studies suggest that CEO duality increase managers' power over the board, and constitutes a clear conflict of interests between managers and shareholders (Rechner & Dalton, 1991; Kesner, Victor & Lamont, 1986). Kesner et al. (1986) also find that firms with CEO duality are more likely to commit illegal acts than firms with independent leadership. Rechner and Dalton (1991) suggest that firms with independent leadership

consistently outperform CEO duality firms. Daily and Dalton (1994) find firms with CEO duality are more likely to go into bankruptcy than firms with independent leadership. Westphal and Zajac (2001) document the negative association between the extent of a CEO's power over the board and the probability of implementing repurchase programs. Three measures for a CEO's power over the board include the existence or absence of CEO tenure, the portion of the board appointed after the CEO, and the CEO's joint possession of the CEO and board chair positions. Moreover, managerial discretion is more pronounced in the case of share repurchase than in the case of dividends because the market responds more negatively to the decline in dividends than that in a share repurchase (Jagannathan, Stephens & Weisbach, 2000; Song, 2002; Grullon & Michaely, 2002).

However, the focus of the agency problem has shifted from the top management and stockholders to controlling shareholders and non-controlling shareholders in recent years (La Porta, Lopez-de-Silanes & Shleifer, 1999). This is particularly true for countries located in Western Europe and East Asia. Hence, if controlling shareholders want to involve themselves in the operation of the firm and expropriate the non-controlling shareholders' wealth, they will tend to control both the board and top management. Unlike prior research, this paper focuses on how the possible wealth transfers through CEO duality as well as board duality structures affect share repurchase decisions. While a share repurchase decision is subject to the approval of the board in Taiwan, CEO duality as well as board duality intensify the agency conflicts between controlling shareholders and non-controlling shareholders. Therefore, share repurchase for the purpose of transferring shares to employees not only increases managerial compensation, but also raises directors' compensation even without considering positive stock price reactions.

Therefore, firms with CEO duality as well as board duality will tend to repurchase shares for the purpose of transferring shares to employees instead of repurchasing shares for the other two purposes because directors with dual positions can increase their stock compensation by executing share repurchase programs and then transferring a major portion of the repurchased shares to themselves. According to the above logic, we develop our first hypothesis:

H1a. Firms with CEO duality are more likely to repurchase shares for the purpose of transferring shares to employees.
H1b. Firms with a greater extent of board duality are more likely to repurchase shares for the purpose of transferring shares to employees.

Firms with CEO and board duality intensify the agency conflicts between controlling shareholders and non-controlling shareholders. When the repurchased shares are transferred to employees (i.e. when the process does not increase the directors' shares), such a program provides potential ownership interests which could motivate employees by aligning their interests with those of shareholders. However, firms with CEO duality and a high degree of board duality tend to transfer a large proportion of repurchased shares to controlling shareholders. This has two negative impacts: one is failing to align the interests of professional employees with all shareholders in the firm, which will lower firms' performance; the other is the possibility of wealth transfer from non-controlling shareholders to controlling shareholders. From this perspective, the market reaction to a share repurchase program for the purpose of transferring shares to employees will largely be affected by whether or not firms involve CEO duality as well as board duality. Thus, we propose that the market will favour firms without either CEO duality or board duality. Hence, we suggest the following hypotheses:

H2a. The market response to repurchase for firms with CEO duality is less favourable.
H2b. The market response to firms with a greater extent of board duality is less favourable.

Following our second hypothesis, we explore a board's role in monitoring and evaluating a firm, as well as its top management. The outsider dominance perspective has been popular since the 1960s. Advocates of the outsider dominance perspective argue that the monitoring power of outsiders reflects on high levels of performance (Mehran, 1992). The probability of voluntary disclosure increases as firms increase their proportions of independent directors (Cheng & Courtenay, 2006). Firms with higher proportions of independent directors are less likely to go into bankruptcy, be involved in fraud, be taken over, or go unlisted (Daily & Dalton, 1994; Beasley, 1996; Oswald &

Young, 2008)[2]. The appointment of independent directors has a significantly positive impact on the firm's performance (Choi, Park & Yoo, 2007; Luan & Tang, 2007; Young, Tsai & Hsieh, 2008). Furthermore, if controlling shareholders abuse their power to pass proposals benefiting only themselves in the board meetings, independent directors can voice their opposition which is entered into the records of the board meetings. Therefore, the existence of independent directors leads to higher probability that the opposing opinions will enter into the records of the board meetings. In addition, all investors in the market can obtain these records and accordingly adjust their investment portfolios.

Ginglinger and L'her (2006) find a positive average market reaction to share repurchase announcements in France. However, the magnitude of the price reaction is found to depend on a number of corporate governance mechanisms. The positive aspects of the announcement only appear for a firm with a low probability of being taken over, and with a low risk of non-controlling shareholder expropriation. As noted in the introduction section, prior studies suggest that board independence plays an important role in monitoring the behaviour of firms, leading to a lower risk of non-controlling interest being expropriated. Additionally, Becker-Blease and Irani (2008) find that board independence mitigates the negative effect of equity offering announcements on share price. Hence, we propose that independent directors, representing a well-structured monitoring mechanism, are expected to enhance repurchase decision quality by aligning the interests of controlling shareholders and non-controlling shareholders. Consequently, the negative market reaction toward firms with CEO duality as well as a high extent of board duality will be mitigated by the monitoring force of independent directors. Thus, the following hypotheses are developed:

H3a. The unfavourable market response to the firms with CEO duality is mitigated by independent directors.

H3b. The unfavourable market response to firms with a higher extent of board duality is mitigated by independent directors.

[2] Proponents of high proportions of insiders counter that outsiders are not significantly related to the decrease in numbers of illegal acts and those firms that have been exposed to illegal acts will not recruit more outsiders to improve monitoring (Kesner et al., 1986).

3. Data and Methodology

3.1 Data

This paper collects cross-sectional annual data of the announcement for open market share repurchase programs between Aug. 2000 and Dec. 2008 from the Market Observation Post System website. Our sample excludes financial institutions, insurance companies, and firms with missing data. Sample firms are required to trade in the Taiwan Stock Exchange market. Financial data is retrieved from the Taiwan Economic Journal (TEJ) database.

Out of the original 1,933 announcements, we deleted 480 observations due to data unavailability in the TEJ. These deletions resulted in a sample of 1,453 observations. Independent variables in empirical models are generally measured at the beginning of the repurchase year unless otherwise indicated.

Table 1 describes the annual distribution of repurchasing programs according to their purposes. Repurchasing programs for Purpose 1 make up the largest sample size among all repurchasing programs during our research period. The final sample size of 1,453 includes 856 (58.91%) repurchasing programs for Purpose 1, and 597 (41.09%) repurchasing programs for Purpose 2 or Purpose 3. Among these 597 repurchasing programs, only 9 of them are for Purpose 2 and most of them (588) were for purpose 3.

3.2 Repurchasing purposes and board duality

Our first hypothesis examines the effect of CEO duality as well as board duality on share repurchase with the purpose of transferring shares to employees. We conduct two logit regressions as follows.

Model 1:

$$PURPOSE = \alpha_0 + \alpha_1 CEOCHAIR + \alpha_2 SIZE + \alpha_3 BM + \alpha_4 FCF + \alpha_5 DEBT + \alpha_6 PUR + \alpha_7 OPTION + \alpha_8 DIV + \alpha_9 DEAL + \alpha_{10} Y1 + \cdots + \alpha_{17} Y8 + \alpha_{18} RET + \alpha_{19} ROLL + \alpha_{20} VAST + \alpha_{21} FAST + \varepsilon$$

Model 2:

$$PURPOSE = \alpha_0 + \alpha_1 BODDUL + \alpha_2 SIZE + \alpha_3 BM + \alpha_4 FCF + \alpha_5 DEBT + \alpha_6 PUR + \alpha_7 OPTION + \alpha_8 DIV + \alpha_9 DEAL + \alpha_{10} Y1 + \cdots + \alpha_{17} Y8 + \alpha_{18} RET + \alpha_{19} ROLL + \alpha_{20} VAST + \alpha_{21} FAST + \varepsilon$$

Where PURPOSE is a dummy variable which equals 1 if firms repurchase shares and then transfer them to employees and zero if firms repurchase shares to fund conversion of convertible securities or stabilize stock prices. To test our first hypothesis, we include CEOCHAIR and BODDUL in Models 1 and 2 respectively. CEOCHAIR is a dummy variable which is set to one when the CEO concurrently serves as the chairman of the board and zero otherwise. BODDUL is the number of executive officers serving as members of the board. When a firm has duality problems, controlling shareholders have incentives to initiate a repurchase program for their benefits. Then we expect that CEOCHAIR and BODDUL are positively related to the decision on share repurchase with the purpose of transferring shares to employees.

Table 1: Sample Distribution

		Purpose 1		Purpose 2 and 3	
Year	Repurchases	Number	(%)	Number	(%)
2000	105	72	68.57	33	31.43
2001	130	85	65.38	45	34.62
2002	106	54	50.94	52	49.06
2003	108	69	63.89	39	36.11
2004	221	138	62.44	83	37.56
2005	131	66	50.38	65	49.62
2006	144	92	63.89	52	36.11
2007	119	82	68.91	37	31.09
2008	389	198	50.90	191	49.10
Total	1453	856	58.91	597	41.09

The regulation in Taiwan allows firms to announce share repurchase for three purposes. Purpose 1 is to transfer shares to employees. Among 597 announcements with Purpose 2 and Purpose 3, Purpose 2 only accounts for 9 of them.

We control for firm-specific attributes, time variations, overall market fluctuation and the unique regulation environment in Taiwan. First, we include the following variables related to firm-specific attributes. We include firm size (SIZE), book to market ratio (BM) to control under pricing (Vermaelen, 1981; Comment & Jarrel, 1991; Ikenberry et al., 1995; Stephens & Weisbach, 1998). SIZE is the natural log of total assets at the end of the year prior to the repurchase and BM is the book value of equity to the market value of equity. We include free cash flows (FCF) to control firms distributing excess cash to shareholders

(Dittmar, 2000). FCF is the operating profits plus depreciation, interest, taxes paid and cash dividends, scaled by total assets at the end of the year prior to the repurchase. We include debt ratio (DEBT) to control firms repurchasing shares to adjust their financial structures (Dittmar, 2000). DEBT is total liabilities divided by total assets at the end of the year prior to the repurchase.

Since shares sought to be purchased (PUR) is positively related to market reaction (Ho, Liu & Ramanan, 1997), it affects repurchase decisions. PUR is the ratio of announced number of shares to be repurchased to total number of shares outstanding. We include exercisable employee options (OPTION) for firms repurchasing shares to execute stock options (Kahle, 2002). OPTION is a dummy variable which equals one if firms have options exercisable over the three fiscal years preceding the announcement year and zero otherwise. We include dividends (DIV) because dividends and share repurchase are important tools in making payout decisions (Grullon & Michaely, 2002; Jagannathan & Stephens, 2003). DIV is the dividends paid scaled by market value at the end of the year prior to the repurchase. DEAL is the average monthly trading volume in the fiscal year prior to the announcement as a percentage of outstanding shares. We control for DEAL because Lucas and McDonald (1998) think firms with higher trading volume regard adverse selection as less important and end up repurchasing more frequently.

We next include the following variables related to time variations, overall market fluctuation and the unique regulatory environment in Taiwan. We control for time variations (Y1…Y8) because the number of firms repurchasing shares with Purpose 1 varies over time. In addition, we control for cumulative daily returns during the period of complementation (RET) and standard deviation of returns during the period of complementation (ROLL) because the expected market situation affects the willingness to make an announcement (Ikenberry, Lakonishok & Vermaelen, 2000). RET is cumulative daily returns during the buyback period and ROLL is standard deviation of returns during the buyback period. Finally, we control vast repurchases (VAST) and fast completion of repurchase programs (FAST). VAST is a dummy variable which equals 1 if firms have reacquired shares in terms of quantities or dollar amounts conforming to the vast repurchase standard, and zero otherwise. FAST is a dummy variable which equals 1 if firms complete repurchases at least five days before the program expires, and zero otherwise. VAST and FAST variables highlight the unique regulatory situation in Taiwan. The regulation in Taiwan state that once firms meet the vast repurchase standard with the number of shares repurchased

reaching two percent of total outstanding shares or the value of shares repurchased reaching 0.3 billion during the buyback period, firms have to publically disclose the details of their vast repurchase immediately.[3]

3.3 Announcement abnormal returns and board duality

As for the second and third hypotheses, we examine whether CEO and Board duality are associated with the stock price reaction surrounding the announcement of share repurchase with the purpose of transferring them to employees and how the monitoring role of independent directors works in this context. According to the regulation governing share repurchase in Taiwan, the open market share repurchase program must gain the approval of the board and be announced to the public within two days. Hence, the market may react to the open market share repurchase program as early as two days before the announcement. As a result, we define the event period as two days before through two days after the announcement date (day 0). We calculate CAR5 using the market model in which we estimate its parameters over the window (-122, -21).

We explore the monitoring force using INDEP, the number of independent directors deflated by the total numbers of directors in the board. To test these two hypotheses, we include CEOCHAIR and the interaction of CEOCHAIR and INDEP into Model 3 while BODDUL and the interaction of BODDUL and INDEP into Model 4. We estimate Models 3 and 4 below, using OLS regression:

Model 3:

$$CAR5 = \alpha_0 + \alpha_1 CEOCHAIR + \alpha_2 CEOCHAIR^{*} INDEP + \alpha_3 INDEP + \alpha_4 SIZE + \alpha_5 BM + \alpha_6 FCF + \alpha_7 DEBT + \alpha_8 PUR + \alpha_9 OPTION + \alpha_{10} DIV + \alpha_{11} DEAL + \alpha_{12} Y1 + \cdots + \alpha_{19} Y8 + \alpha_{20} PRET + \alpha_{21} PROLL + \varepsilon$$

[3] There are several other possible objectives of repurchases which may have some relations with the three purposes. However, hostile takeover seldom happens in Taiwan, so share repurchase has not been used to fend off takeovers. Further, firms may repurchase with multiple purposes including three mandatorily disclosed purposes, substituting cash dividends, distributing excess cash or adjusting company leverage. Investors cannot identify other purposes which are not required to be disclosed and possible to hide behind these three mandatorily disclosed purposes. Hence, we control for several variables corresponding to the above objectives of repurchases.

Model 4:

$$CAR5 = \alpha_0 + \alpha_1 BODDUL + \alpha_2 BODDUL^{*} INDEP + \alpha_3 INDEP + \alpha_4 SIZE + \alpha_5 BM + \alpha_6 FCF + \alpha_7 DEBT + \alpha_8 PUR + \alpha_9 OPTION + \alpha_{10} DIV + \alpha_{11} DEAL + \alpha_{12} Y1 + \cdots + \alpha_{19} Y8 + \alpha_{20} PRET + \alpha_{21} PROLL + \varepsilon$$

Where CAR5 is the average cumulative abnormal returns over the five days surrounding the announcement. CEOCHAIR is a dummy variable which is set to one when the CEO concurrently serves as the chairman of the board and zero otherwise. BODDUL is the number of executive officers serving as members of the board. INDEP is the number of independent directors, deflated by the total numbers of directors in the board at the beginning of the fiscal year prior to the announcement date. SIZE is the natural log of total assets at end of the year prior to the repurchase and BM is the book value of equity to the market value of equity at end of the year prior to the repurchase. FCF is the operating profits plus depreciation, interest, taxes paid and cash dividends, scaled by total assets at end of the year prior to the repurchase. DEBT is total liabilities divided by total assets at end of the year prior to the repurchase. PUR is the ratio of announced number of shares to be repurchased to total number of shares outstanding. OPTION is a dummy variable which equals one if firms have options exercisable over the three fiscal years preceding the announcement year and zero otherwise. DIV is the dividends paid scaled by market value at end of the year prior to the repurchase. DEAL is the average monthly trading volume in the fiscal year prior to the announcement as a percentage of outstanding shares. Time variations (Y1…Y8) correspond to the research period over 2000 and 2008. PRET is the 20-day cumulative abnormal returns prior to the repurchase announcement date (day 0) estimated using market model. PROLL is the standard deviation of returns for 20 trading days prior to the announcement date.

We expect the negative coefficient on CEOCHAIR or BODDUL and the positive coefficient on the interaction term because firms with duality problems elicit a less favourable price reaction when they announce repurchase programs and the presence of independent director may discipline controlling shareholders and act in favour of non-controlling shareholders.

Besides, we employ SIZE and BM as control variables since prior research suggests that stock price reaction is favourable for firms with smaller size and higher book-to-market ratios (Ikenberry et al., 1995; Ho et al., 1997; Dittmar, 2000). We control for FCF and DEBT because market reacts favourably when firms repurchase shares to distribute excess capital or adjust their leverage ratio to their target ratio (Chan, Ikenberry

& Lee, 2004). We control for PUR because the announcement period abnormal returns are positively related to PUR (Comment & Jarrell, 1991; Ho, Liu & Ramanan, 1997; Stephens & Weisbach, 1998). We control for OPTION and DIV because the announcement returns are less positive for firms which repurchase shares to fund employee option exercise and are more positive for firms which historically never distribute capital to shareholders through dividends (Kahle, 2002). We employ DEAL for the finding of Ginglinger and L'her (2006) that the market reaction is more positive for firms listed on secondary or new markets. We control for time variations (Y1…Y8) because the market reaction to share repurchase announcements may vary over time. We control for the market situation preceding the announcement (PRET and PROLL), measured by prior cumulative abnormal returns (PRET) and prior standard deviation of returns (PROLL) from days -20 through day -1 relative to the repurchase announcement date estimated using market model, because the announcement abnormal returns are preceded by negative and unstable market performance (Stephens & Weisbach, 1998; Dittmar, 2000; Ginglinger & L'her, 2006).

4. Empirical results

4.1 Descriptive statistics

Our first objective is to determine whether CEO duality and board duality induce firms to repurchase shares for Purpose 1, hereby affecting the market reaction around the announcement of open-market share repurchase. We employ CEO duality (CEOCHAIR) and board duality (BODDUL) to measure the expropriation incentive of controlling shareholders. We examine the first question by regressing repurchase announcements for the purpose of transferring shares to employees (PURPOSE), and the announced period returns on CEO duality as well as board duality. Our second objective is to determine whether independent directors help relieve duality problems and receive favourable market responses. We examine the second question by regressing CEO duality, board duality, and the announced returns on the proportion of independent directors. Panel A of Table 2 contains descriptive statistics for all the variables employed in this study, and Panel B explains how these variables are measured.

Table 2: Descriptive Statistics and Variable Definitions

Panel A: Descriptive Statistics

Variables	Mean	Std	Min	Median	Max
Dependent Variables:					
PURPOSE	0.589	0.492	0.000	1.000	1.000
CAR5	0.012	0.071	-0.337	0.015	0.291
Board Independence:					
CEOCHAIR	0.339	0.473	0.000	0.000	1.000
BODDUL	2.085	1.293	0.000	2.000	9.000
INDEP	0.074	0.125	0.000	0.000	0.444
Other Variables:					
SIZE	15.967	1.252	13.450	15.780	20.170
BM	0.966	0.560	0.105	0.858	5.102
FCF	0.038	0.053	-0.085	0.031	0.297
DEBT	0.363	0.146	0.002	0.364	0.943
PUR	0.029	0.022	0.002	0.025	0.350
OPTION	0.361	0.481	0.000	0.000	1.000
DIV	0.027	0.026	0.000	0.023	0.150
DEAL	0.232	0.173	0.005	0.194	1.108
PRET	-0.061	0.153	-1.143	-0.049	0.658
PROLL	0.027	0.010	0.000	0.027	0.057
RET	0.047	0.213	-0.585	0.034	1.344
ROLL	0.027	0.010	0.005	0.027	0.058
VAST	0.374	0.484	0.000	0.000	1.000
FAST	0.215	0.411	0.000	0.000	1.000

Table 2 Panel B: Variable Definitions

Dependent Variables:	
PURPOSE:	a dummy variable which equals 1 if announcing firms transferring shares to employees, and zero otherwise;
CAR5:	the 5-day (-2, +2) cumulative abnormal returns centering the announcement date (day 0) calculated using market model. Its parameters are estimated over the window (-122, -21).
Independent Variables:	
CEOCHAIR:	a dummy variable which equals 1 if the chairman also serves as CEO of the board and zero otherwise;
BODDUL:	the number of members of the board simultaneously serving as executive officers including the CEO of the board;
INDEP:	the number of independent directors, deflated by the total numbers of directors in the board at the beginning of the fiscal year prior to the announcement date.
Other Variables:	
SIZE:	the natural log of total assets at the beginning of the fiscal year;
BM:	the book value of equity divided by market value of the firms at the beginning of the fiscal year;
FCF:	operating profits plus depreciation, interest, taxes paid and cash dividends, scaled by total assets at the beginning of the fiscal year;
DEBT:	total liabilities divided by total assets at the beginning of the fiscal year;
PUR:	the ratio of the announced number of shares to be repurchased to the total number of shares outstanding at the beginning of the fiscal year;
OPTION:	a dummy variable which equals one if firms have options exercisable over the three fiscal years preceding the announcement year and zero otherwise;
DIV:	the dividends paid, scaled by market value at the beginning of the fiscal year;
DEAL:	the average monthly trading volume in the fiscal year preceding the announcement year, scaled by outstanding shares at the beginning of the fiscal year;
PRET:	the 20-day cumulative abnormal returns prior to the repurchase announcement date (day 0) estimated using market model;
PROLL:	standard deviation of returns for 20 trading days prior to announcement date;
ROLL:	standard deviation of returns during the period of complementation;
RET:	cumulative daily returns during the buyback period;
VAST:	a dummy variable which equals 1 if firms have reacquired shares in terms of quantities or dollar amounts conforming to the regulation governing vast repurchase standard, and zero otherwise;
FAST:	a dummy variable which equals 1 if firms complete repurchases at least five days before the program expires, and zero otherwise

As for repurchase purpose (PURPOSE), more than half (58.9%) of

repurchase programs are motivated to repurchase shares for Purpose 1. The average 5-day cumulative abnormal returns surrounding the announcement (CAR5) is about 1.2 percent. Approximately one-third (33.9%) of the CEOs serve in the dual role as board chairmen, and on average, two board directors concurrently serve as top management..

In Table 2, we also report the descriptive statistics of the control variables, including firm size (SIZE), book-to-market ratio (BM), free cash flows (FCF), leverage ratio (DEBT), target purchase (PUR), option exercisable (OPTION), dividends payout ratio (DIV), transaction cost (DEAL), the cumulative abnormal returns as well as their standard deviation over the 20 days prior to the announcement (PRET and PROLL), the cumulative abnormal returns as well as their standard deviation during the buyback period (RET and ROLL), the vast repurchase (VAST), and the fast completeness of repurchase programs (FAST).

Around 37.4% (the mean of VAST) of the repurchase program in our sample met the vast repurchase standard. The regulation in Taiwan also states that the valid period for firms to fulfil their repurchase programs is two months following the announcement date. About 21.5 per cent (the mean of FAST) of repurchase programs have been completed at least five days prior to the last day of two-month limit[4].

4.2 Multiple regression analysis

As reported in the results corresponding to Model 1 and Model 2 of Table 4, the coefficient of CEOCHAIR is 0.273, while that of BODDUL is 0.121, and both are significant. After controlling other variables, the results indicate that CEO duality and board duality firms are positively associated with the purpose of repurchasing shares to transfer them to employees, supporting H1.

Besides, the coefficient of SIZE and BM are negative and significant, indicating that small firms with low book-to-market ratio are more likely to repurchase shares and transfer them to employees. The coefficient on OPTION is positive and significant. Stock options do not appear to be replacing stock grant, rather they seem to serve the complementary role of compensation. The coefficient on DEAL is positive and significant. A higher trading volume booms repurchase transactions. Following Li and McNally (2003) who show unstable market situation before the repurchase announcement, the significant positive coefficient of ROLL

[4] As reported in Table 3, there is no threat of multicollinearity among variables

shows market continues to be unstable following the announcement. Conversely, the results show that PUR, VAST and FAST are negatively related to PURPOSE. This suggests that when firms repurchase shares with the purpose of transferring shares to employees, they tend to seek a smaller repurchase target, shares are actually repurchased each time at the cost less than that regulated in the vast repurchase standard[5], and the repurchase programs are not completed fast. However, the significantly positive coefficient of DEBT does not support the optimal leverage hypothesis, but this suggests that managers increase debts to repurchase shares with the purpose of transferring shares to employees despite the current high level of debt loads[6].

F-statistics of Model 3 and Model 4 in Table 5 are 5.42 and 5.41, respectively. Both are significant at the one percent level. As reported in the results corresponding to Model 3 and Model 4 of Table 5, the coefficient of CEOCHAIR is -0.014, while that of BODDUL is -0.004, and both are significant. Empirical results suggest that, after controlling other variables, both CEO duality and BOARD duality are significantly negatively associated with the cumulative abnormal returns surrounding the announcement, supporting H2a and H2b.

When it comes to the effect of independent directors on the cumulative abnormal returns following share repurchase decisions, the coefficient of interaction variables CEOCHAIR*INDEP are positively significant. The coefficients on CEOCHAIR*INDEP and BODDUL*INDEP are 0.076 and 0.032, significant at the five percent level or better, suggesting that the association between the market reaction and firms with duality problems is significantly more positive for the subsample of firms with high percentage of independent directors. Taken together, the result how that the unfavourable market response to firms with CEO duality and board duality is mitigated by independent directors consistent with what we expected to find, thus supporting H3a and H3b.

On the other hand, consistent with the signalling hypothesis, CAR5 is more positive for smaller firms characterised by a high degree of

[5] To meet the vast repurchase standard, the number of shares repurchased by firms have to reach two percent of total outstanding shares or the value of shares repurchased have to reach 0.3 billion.

[6] Considering the more deviation between voting and cash flow rights, the more incentives for controlling shareholders to take advantage of the repurchase program with Purpose 1, we include an additional control variable, voting and cash flow disparity (VTCF), in Models 1 and 2 and get similar results.

Table 3: Correlation Matrices

	PURPOSE	CAR5	CEO	CHAIR	BODDUL	INDEP	SIZE	BM	FCF	DEBT	PUR	OPTION	DIV	DEAL	PRET	PROLL	RET	ROLL	VAST	FAST
PURPOSE																				
CAR5	-0.11																			
CEOCHAIR	0.09	-0.07																		
BODDUL	0.09	-0.06	0.31																	
INDEP	0.10	0.03	-0.01	-0.08																
SIZE	-0.06	-0.04	-0.09	0.08	-0.08															
BM	-0.21	0.09	-0.06	-0.05	-0.23	0.05														
FCF	0.10	0.01	0.02	0.05	0.10	0.09	-0.30													
DEBT	0.09	-0.03	-0.01	-0.03	-0.02	0.20	0.07	-0.09												
PUR	-0.19	0.15	-0.07	-0.04	0.01	-0.20	-0.03	-0.03	-0.02											
OPTION	0.13	-0.07	0.04	0.00	0.28	0.00	-0.21	0.15	-0.07	-0.12										
DIV	-0.06	0.01	-0.03	-0.02	0.15	-0.03	-0.18	0.03	-0.09	0.04	0.02									
DEAL	0.14	-0.10	0.09	0.09	0.00	-0.07	-0.31	0.20	-0.01	0.09	0.17	-0.04								
PRET	-0.07	0.22	-0.02	0.01	-0.10	0.06	0.16	-0.11	-0.02	-0.01	-0.14	0.03	-0.10							
PROLL	0.04	0.02	0.02	0.04	-0.03	0.02	-0.11	0.04	0.04	0.11	0.10	-0.10	0.24	-0.17						
RET	0.01	0.15	0.01	0.04	-0.05	-0.03	0.13	-0.02	0.03	0.10	-0.08	-0.08	-0.07	0.06	-0.09					
ROLL	0.08	-0.09	0.02	0.06	-0.04	0.06	-0.07	0.03	0.06	0.04	0.08	-0.10	0.24	-0.15	0.59	-0.06				
VAST	-0.12	0.07	-0.05	0.01	0.01	0.05	-0.02	0.05	-0.02	0.19	0.00	0.05	0.02	0.05	-0.08	-0.02	-0.09			
FAST	-0.01	-0.01	0.04	0.03	-0.01	0.04	-0.05	-0.01	-0.02	-0.18	0.07	0.02	0.04	0.04	-0.10	-0.10	-0.07	0.23		

Numbers represent Pearson correlation. All variables are defined in Table 2.

information asymmetry. It is also positively related to the ratio of free cash flow to assets, indicating the repurchase helps distribute excess capital. Consistent with prior findings (Comment & Jarrell, 1991; Ho et al., 1997; Stephens & Weisbach, 1998), PUR is significantly positive related to CAR5. When firms with higher trading volume (DEAL) regard the adverse selection as less serious, the negative association between DEAL and CAR5 implies that more costly repurchases send a stronger signal. The significantly positive coefficient of PROLL is consistent with Li and

Table 4: Results of Regressing Share Repurchase Purposes on Duality

		Model 1		Model 2	
Independent Variables	Expected Sign	Coefficient	p-value	Coefficient	p-value
INTERCEPT	?	4.414 ***	0.000	4.559 ***	0.000
CEOCHAIR	+	0.273 **	0.016		
BODDUL	+			0.121 ***	0.006
SIZE	+	-0.207 ***	0.000	-0.229 ***	0.000
BM	-	-0.886 ***	0.000	-0.888 ***	0.000
FCF	+	0.847	0.246	0.892	0.237
DEBT	-	1.653 ***	0.000	1.754 ***	0.000
PUR	-	-25.904 ***	0.000	-26.313 ***	0.000
OPTION	+	0.476 ***	0.000	0.470 ***	0.000
DIV	-	-2.391	0.161	-2.873	0.116
DEAL	+	0.658 *	0.053	0.640 *	0.057
Y1	?	0.264	0.208	0.324	0.161
Y2	?	-0.383	0.119	-0.287	0.191
Y3	?	-0.106	0.379	-0.029	0.467
Y4	?	-0.366	0.109	-0.291	0.166
Y5	?	-0.617 **	0.029	-0.567 **	0.042
Y6	?	-0.284	0.190	-0.172	0.299
Y7	?	-0.294	0.191	-0.187	0.291
Y8	?	-1.065 ***	0.000	-0.936 ***	0.001
RET	+	0.213	0.241	0.211	0.241
ROLL	+	19.629 ***	0.004	18.297 ***	0.007
VAST	-	-0.264 **	0.020	-0.278 **	0.016
FAST	-	-0.247 **	0.048	-0.246 **	0.049
N		1453		1453	
Pseudo-R^2		0.1287		0.1299	

This Table reports logit regression results relating the repurchases' purpose (PURPOSE) to CEO duality (CEOCHAIR) and board duality (BODDUL) along with controlling variables. The p-value is one-tailed probability for coefficient estimates.*, **, and *** denote significance at the 0.1, 0.05 and 0.01 levels, respectively. All variables are defined in Table 2.

McNally (2003) who show that unstable market situation precedes the repurchase announcement. However, the finding that PRET is positively related to CAR5 is not consistent with the undervaluation hypothesis which suggests that poor market situation leads the announcement of repurchase programs. It is likely based on the result that more repurchase programs are motivated by transferring shares to employees

Table 5: Results of Regressing 5-Day Abnormal Returns Surrounding the Announcement of Share Repurchases on Duality and Other Variables

		Model 3		Model 4	
Independent Variables	Expected Sign	Coefficient	p-value	Coefficient	p-value
INTERCEPT	?	0.031	0.189	0.025	0.237
CEOCHAIR	-	-0.014 **	0.011		
CEOCHAIR*INDEP	+	0.076 **	0.016		
BODDUL	-			-0.004 **	0.023
BODDUL*INDEP	+			0.032 ***	0.010
INDEP	+	0.011	0.330	-0.028	0.226
SIZE	-	-0.003 *	0.090	-0.002	0.143
BM	+	0.005	0.226	0.006	0.214
FCF	+	0.077 *	0.056	0.078 *	0.055
DEBT	-	-0.004	0.410	-0.005	0.392
PUR	+	0.325 **	0.016	0.369 ***	0.007
OPTION	+	0.003	0.269	0.004	0.241
DIV	-	0.026	0.402	0.045	0.331
DEAL	-	-0.050 ***	0.002	-0.050 ***	0.002
Y1	?	-0.009	0.246	-0.009	0.251
Y2	?	-0.010	0.232	-0.011	0.194
Y3	?	0.017 *	0.089	0.015	0.105
Y4	?	-0.018 *	0.067	-0.019 *	0.057
Y5	?	0.000	0.497	-0.002	0.442
Y6	?	0.012	0.192	0.010	0.233
Y7	?	0.002	0.448	0.001	0.476
Y8	?	-0.013	0.145	-0.016 *	0.098
PRET	-	0.122 ***	0.000	0.120 ***	0.000
PROLL	+	1.033 ***	0.001	1.073 ***	0.001
N		856		856	
Adj-R^2		0.1075		0.1074	

This Table reports the ordinary least regression results relating the (-2, +2) abnormal returns (CAR5) to CEO duality (CEOCHAIR) and board duality (BODDUL) along with controlling variables. We obtain CAR5 using the market model. The parameters are estimated over the window (-122, -21) where the announcement date is day 0. The p-value is one-tailed probability for coefficient estimates. .*, **, and *** denote significance at the 0.1, 0.05 and 0.01 levels, respectively. All variables are defined in Table 2.

rather than signalling undervaluation (58.91% vs. 41.09% as shown in Table 1).

5. Conclusion

Using data for the years 2000-2008 in Taiwan, we examine the effect of CEO duality and board duality on share repurchases for the purpose of transferring shares to employees, an issue which has never been explored by prior studies. Within the aforementioned context, CEO duality and board duality may be related to the possible wealth transfer between controlling shareholders and non-controlling shareholders. Our empirical evidence supports the notion that CEO duality and board duality are positively associated with the probability of share repurchases for the purpose of transferring shares to employees. Our findings also suggest that market response to firms with both CEO duality and board duality is negative. However, independent directors could mitigate the negative effects of CEO duality and board duality on the market reaction.

Our study contributes to the existing literature by extending open market share repurchase literature to include an examination of board duality within the context of repurchase for a specific purpose, and relating to the possible wealth transfer between controlling and non-controlling shareholders. This study benefits from the special regulation of share repurchases in Taiwan, which requires the authorisation of repurchase programs by board of directors, as well as the disclosure of repurchase purposes and the cancellation of repurchased shares. The unique environment in Taiwan gives us a good opportunity to investigate the association between organisational duality and share repurchase decisions.

Our research also expands the literature on independent directors by exploring their role in share repurchase decisions and the impact they have on the cumulative abnormal market returns. Our findings suggest that the agency problems in duality firms become more serious when controlling shareholders with dual positions have discretion over repurchase decisions. The authorities concerned should be given notice of this potential wealth transfer from non-controlling shareholders to controlling shareholders.

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References

Abbott, L. J. & Parker, S. (2000). Auditor selection and audit committee characteristics. *Auditing: A Journal of Practice and Theory,* 19, 47-66.

Ajinkya, B., Bhojraj, S. & Sengupta, P. (2005). The association between outside directors, institutional investors and the properties of management earnings forecasts. *Journal of Accounting Research,* 43(3), 343-376.

Bagwell, L. S., & Shoven, J. B. (1988). Share repurchases and acquisitions: An analysis of which firms participate. In *Corporate Takeover: Causes and Consequences*, ed. A. J. Auerbach, Chicago: University of Chicago Press, 191-220.

Barth, M. E. & Kasznik, R. (1999). Share repurchases and intangible assets. *Journal of Accounting and Economics*, 28, 211-241.

Beasley, M. S. (1996). An empirical analysis of the relation between the board of director composition and financial statement fraud. *The Accounting Review,* 71(4), 443-465.

Beasley, M. S. & Petroni, K. R. (2001). Board independence and audit-firm type. *Auditing: A journal of Practice and Theory,* 20(1), 97-114.

Becker-Blease, J. R. & Irani, A. J. (2008). Do corporate governance attributes affect adverse selection costs? Evidence form seasoned equity offerings. *Review of Quantitative Finance and Accounting,* 30, 280-296.

Byrd, J. W. & Hickman, K. A. (1992). Do outside directors monitor managers? Evidence from tender offer bids. *Journal of Financial Economics,* 32(2), 195-222.

Chan, K., Ikenberry, D. & Lee. I (2004). Economic sources of gain in stock repurchases. *Journal of Financial and quantitative Analysis,*39(3), 461-479.

Chang, S. C., Lai, J. H. & Yu, C. H. (2005). The intra-industry effect of share repurchase deregulation: Evidence from Taiwan. *Review of Pacific Basin Financial Markets and Policies,* 8(2), 251-277.

Chen, M., Chen, C. L. & Cheng, W. H. (2004). The announcement effects of restricted open market share repurchases: Experience from Taiwan. *Review of Pacific Basin Financial Markets and Policies,* 7(3), 335-354.

Cheng, E. C. M. & Courtenay, S. M. (2006). Board composition, regulatory regime and voluntary disclosure. *The International Journal of Accounting,* 41(3), 262-289.

Choi, J. J., Park, S. W. & Yoo, S. S. (2007). The value of outside directors: Evidence from corporate governance reform in Korea. *Journal of Financial and Quantitative Analysis* ,42(4), 941-962.

Comment, R. & Jarrell, G. (1991). The relative signaling power of Dutch-auction and fixed-price self-tender offers and open-market share repurchases. *Journal of Finance* ,46, 1243-1271.

Daily, C. M. & Dalton, D. R. (1994). Bankruptcy and corporate governance:

The impact of board composition and structure. *The Academy of Management Journal,* 37(6), 1603-1617.

Dittmar, A. K. (2000). Why do firm repurchase stock? *The Journal of Business,* 73(3), 331-355.

Fama, F. E. & Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and Economics,* 26, 301-325.

Fenn, G. W. &Liang, N. (2001). Corporate payout policy and managerial stock incentives. *Journal of Financial Economics,* 60, 45-72.

Ginglinger, E., & L'her, J. F. (2006). Ownership structure and open market stock repurchases in France. *The European Journal of Finance*, 12(1), 77-94.

Grullon, G. & Michaely, R. (2002). Dividends, share repurchases, and the substitution hypothesis. *The Journal of Finance,* 4, 1649-1684.

Hackethal, A., & Zdantchouk, A. (2006). Signaling power of open market share repurchases in Germany. *Financial Markets Portfolio Management,* 20, 123-151.

Ho, Li-Chin J., C. S. Liu & Ramanan, R. (1997). Open-market stock repurchase announcement and revaluation of prior accounting information. *The Accounting Review,* 72(3), 475-487.

Hovakimian, A., Opler, T. & Titman, S. (2001). The debt-equity choice. *The Journal of Financial and Quantitative Analysis,* 36(1), 1-24.

Hu, A. &Kumar, P. (2004). Managerial entrenchment and payout policy. *Journal of Financial and Quantitative Analysis,* 39(4), 759-790.

Ikenberry, D., Lakonishok, J., & Vermaelen, T. (1995). Market underreaction to open market share repurchases. *Journal of Financial Economics,* 39, 181-208.

Ikenberry, D., Lakonishok, J., & Vermaelen, T. (2000). Stock repurchase in Canada: Performance and strategic trading. *The Journal of Finance,* 55(5), 2373-2397.

Jagannathan, C. P., Stephens, M., & Weisbach, M. S. (2003). Financial flexibility and the choice between dividends and stock repurchases. *Journal of Financial Economics,* 57, 355-384.

Jensen, M. C. (1993). The modern industrial revolution, exit and the failure of internal control systems. *Journal of Finance,* 48, 831-880.

Kahle K. M. (2002). When a buyback isn't a buyback: Open market repurchases and employee options. *Journal of Financial Economics,* 63, 235-261.

Karamanou, I., & Vafeas, A. N. (2005). The association between corporate boards, audit committees, and management earnings forecasts: An empirical analysis. *Journal of Accounting research,* 43(3), 453-486.

Kesner, I. F., Victor, B., & Lamont, B. T. (1986). Board composition and the commission of illegal acts: An investigation of fortune 500

companies. *The Academy of Management Journal,* 29(4), 789-799.

Klein, A. (2002). Audit committee, board of director characteristics, and earnings management. *Journal of Accounting and Economics* 33, 375-400.

Kosnik, R. D. (1987). Greenmail: A study of board performance in corporate governance. *Administrative Science Quarterly,* 32(2), 163-185.

La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *Journal of Finance,* 54, 471-517.

Lee, Y.-G., Jung, S.-C., & Thornton, Jr. J. H. (2005). Long-term stock performance after open-market repurchases in Korea. *Global Finance Journal,* 16, 191-209.

Li, K. & McNally, W. (2003). The decision to repurchases, announcement returns and insider holdings: A conditional event study. *The ICFAI Journal of Applied Finance,* 9(6), 55-70.

Luan, C.J. & Tang, M. J. (2007). Where is independent director efficacy? *Corporate Governance: An International Review,* 15, 636-643.

Lucas, D. J. & McDonald, R. L. (1998). Shareholder heterogeneity, adverse selection, and payout policy, *Journal of Financial and Quantitative Analysis*, 33, 233-253.

Mehran, H. (1992). Executive incentive plans, corporate control and capital structure. *The Journal of Financial and Quantitative Analysis,* 27(4), 539-560.

Oswald, Y. & Young, S. (2008). Open market share reacquisitions, surplus cash and agency problems. *Journal of Banking and Finance,* 32(5), 795-806.

Park, Y., & Jung, K. (2005). Stock repurchase in Korea: market reactions and operating performance. *Review of Pacific Basin Financial Markets and Policies,* 8(1), 81-112.

Rechner, P. L., & Dalton, D. R. (1991). CEO duality and organizational performance: A longitudinal analysis. *Strategic Management Journal,* 12, 155-160.

Song, O. R. (2002). Hidden Social Costs of Open Market Share Repurchases. (2009). *Journal of Corporation Law*, 27, 425-480.

Stephens, C. P., & Weisbach, M. S. (1998). Actual share reacquisitions in open-market repurchase programs. *Journal of Finance,* 53(1), 313-333.

Vermaelen, T. (1981). Common stock repurchases and market signaling. *Journal of Financial Economics,* 9, 139-183.

Weisbach, M. (1988). Outside directors and CEO turnover. *Journal of Financial Economics,* 20(1) & (2), 413-460.

Westphal, J. D., & Zajac, E. J. (2001). Decoupling policy from practice: The case of stock repurchase programs. *Administrative Science*

Quarterly, 46(2), 202-228.

Young, C. S., Tsai, L. C., & Hsieh, P. G. (2008). Voluntary appointment of independent directors in Taiwan: Motives and consequences. *Journal of Business Finance and Accounting,* 35(9) & (10), 1103-1137.