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Increase Firm Value? The Evidence from Taiwan**

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Abstract

We examine the stock market reaction to the announcement of outside director appointments in Taiwan. We employ a sample of 58 outside director announcements made by Taiwan Stock Exchange listed firms during the period 1 January, 1999 to 30 June, 2003. Using this data, we can test some important hypotheses regarding the role of outside directors in conjunction with other conditions for corporate performance in affecting the stock market reactions. Our empirical findings indicate that there exists a significantly positive reaction to the announcements. The cumulative abnormal returns ---one indicator of stock market reaction measured by using the methodology of market model based event study --- reached 4.776%. We also find that the abnormal returns are positive and higher with respect to each of the following characteristics: poorer prior corporate performance, the CEO as chairman of the board, larger free cash flow and a higher degree of information asymmetry. Further, we find that the announcement effect is decreasing as number of outside directors increases. Our findings are different from existing literature, for instance, those of Lin, Pope and Young (2003) and Rosenstein and Wyatt (1990) mainly because the outside director appointment is not mandatory in Taiwan. This suggests that the announcement effects could be different across countries. The appointment appears to be more beneficial for a country with poor corporate governance mechanisms.

JEL classification: G34

Keywords: Outside director; Corporate governance; Information asymmetry; Agency problem

1. Introduction

The main purpose of this paper is to examine rigorously some relevant hypotheses regarding the role of outside directors in light of recent theoretical developments in corporate governance literature. We use new data from Taiwan to test some key hypotheses flowing from theory.

Despite outside directors being monitors of management and providers of relevant complementary knowledge [e.g., Fama and Jensen (1983) and Fama (1980)], recent empirical findings indicate that the stock market reaction to the announcement of the appointment of an outside director is economically insignificant. Lin, Pope and Young (2003), for example, found that the market reaction was insignificant based on a sample of 714 appointment announcements made by UK firms. Rosenstein and Wyatt (1990), employing 1251 outside director announcements of US firms, found significant positive excess returns with respect to the announcements but with only 0.13% cumulative abnormal returns. Explanations of the above empirical findings include the outside directors' lack of time, expertise and performance incentives [Lin, Pope and Young (2003)].

Our objective is to examine the stock market reaction to the announcement of outside director appointments in Taiwan. Unlike the US and UK, the appointment of the outside director is not mandatory in Taiwan, except for those firms under securities listings review by the Taiwan Stock Exchange¹ (hereafter TSE). The majority of TSE listed firms have no outside directors on their boards. The announcement of an outside director appointment is unusual in Taiwan. This suggests that the announcement of such appointments is not anticipated by most of the market participants. In addition, compared to US and UK firms, Taiwanese firms, on average, have greater agency problems. This is because fewer corporate governance mechanisms exist in Taiwan. Lin, Pope and Young (2003) pointed out that the monitoring value of outside directors is conditional on the extent of the firm's agency problems. The greater the firm's agency problems, the more beneficial outside directors are likely to be. Therefore, shareholders of Taiwanese firms may benefit more from an outside director appointment. Furthermore, it is plausible to conjecture that, within a firm, the marginal value of the outside director decreases as the number of outside directors increases. In US and UK firms, there are many outside directors on the board. Recently, both NYSE² and NASDAQ³ required that at least 50% of the

¹ See Article 9 of Taiwan Stock Exchange Corporation Criteria for Review of Securities Listings.

² "Proposed Corporate Governance Listing Requirement from the New York Stock Exchange and Nasdaq," Weil, Gotshal & Manges LLP, June 6, 2002.

³ "Press Release – Nasdaq Takes New Actions on Corporate Governance Reform (July 25, 2002)," visited on August 15, 2002, available at http://www.nasdaqnews.com/news/pr2002/ne_section02_141.html

board members be outside directors. Hence, the addition of a new outside director may not significantly increase the firm's value. However, most Taiwanese firms have only one or no outside director. The announcement of an outside director may therefore have significant impact on shareholders leading to an appreciation of stock prices.

In addition to the wealth effect of the announcement, we also studied the relationship between the firms' characteristics and the announcement effects. Lin, Pope and Young (2003) found that share prices respond more favorably to an outside director appointment announcement when board ownership is low. Extending their work, we examined the extent of the announcement effect with respect to firm characteristics including corporate performance, number of outside directors, the CEO as chairman of the board, free cash flow, degree of information asymmetry, and institutional investor ownership.

We expect that the appointment will be more beneficial for a firm with poor prior performance. This is because an outsider-dominant board is more likely to remove the poor performing managers [See, for example, Weisbach (1988)], and managers of poor performing firms will have stronger incentives to enhance corporate performance to avoid being removed. In addition, we believe that the announcement effect is negatively related to the number of outside directors due to decreasing marginal utility of outside directors. That is, the first appointment announcement has the most significant impact on the firm value (for example, in the case of Taiwan), but the impact of subsequent appointments is much smaller if a large number of the board members are outsiders (for example, in the US and UK). Further, Jensen (1993) points out that the monitoring value declines and agency costs increase if the chairman holds the position of CEO. Therefore, outsider monitoring ability is more important and beneficial for such firms and the announcement effect is expected to be better.

Jensen (1986) finds that firms with more free cash flow are associated with more severe overinvestment agency problems. Therefore, we hypothesize that the announcement of an outside director is likely to be more beneficial for a firm with relatively more free cash flow. This is because outsider monitoring could reduce the overinvestment agency costs. We also hypothesize that a company with higher information asymmetry is likely to benefit more from the announcement. This is because outside investors have relatively more difficulty monitoring the managers of such firms because of information asymmetry. The outside directors' monitoring helps investors reduce the potential agency costs resulting from such high information asymmetry. Finally, Pound (1988) suggests that higher agency costs are associated with lower institutional investor ownership. Hence, we expect that companies with

lower institutional investor ownership are likely to benefit more from an outside director announcement.

Our empirical findings indicate that a statistically and causally significant positive reaction occurs to the announcement of an outside director. The cumulative abnormal returns from such an announcement reach 4.776%. We also find that the abnormal returns are positive and higher with respect to each of the following characteristics: smaller number of outside directors, poorer corporate performance, the CEO as chairman of the board, larger free cash flow, and higher degree of information asymmetry.

This paper is organized as follows. Section 2 describes the role of outside directors in corporate governance. Section 3 details the data and methodology. Results are presented in Section 4. Section 5 concludes this paper.

2. The role of outside directors for corporate governance

Many agency theories claim that the outside directors, who can monitor the top management more effectively than other directors, and can also provide relevant expertise, should be an important element of corporate governance. Jensen (1993), Fama and Jensen (1983), Fama (1980), Connors (1989) and Baysinger and Hoskisson (1990), for example, document that outsider-dominated boards are more likely to oversee top management effectively due to outside directors' expertise, independence and objectivity in evaluating the managers' decisions. Consistent with this view, Weisbach (1988) and Huson et al. (2001) present that inside directors' careers are tied to the CEO's and hence generally insiders are unable or unwilling to monitor top management. For this reason, boards comprised of a higher proportion of outside representatives are more likely to enhance firm value. Weisbach (1988), further, points that, the CEO with poor performance is more likely to be removed by an outsider-dominated board. This also indicates that outsiders are better monitors for management.⁴

One key factor that enables outside representatives to reduce agency costs is outsider expertise. Bacon (1973) found that 41% of outsiders were lawyers, bankers, investment specialists or consultants. Eisenberg (1975) also argued that, due to outsider expertise, a board could perform its duty more effectively if the majority of board members were outsiders. Moreover, Rosenstein and Wyatt (1990 and 1997)

⁴ However, Khan(1999, 2005) presents a more nuanced theoretical position on corporate governance in Asia in general and on the role of the board including outsiders in particular. The effect of the board is path dependent and initial conditions are important. See also Khan (1997, 1998) for a discussion of corporate performance in South Korea and Khan(2004a, b) for both South Korea and Taiwan. Khan(2004b) chapter 6 presents an extension of the principal-agent theory of corporate governance to account for the East Asian corporate behavior.

indicated that, as outside board members are providers of relevant knowledge, the announcement of the appointment of an outside director could enhance firm value more than inside directors. Perry and Shivdasani (2001) found that, after a period of poor firm performance, an outsider-dominated board would be more willing and able to propose a restructuring project, and this project would more likely be successful in the outsider-dominated firm.

In addition, a variety of studies indicate that board independence is associated with monitoring the financial accounting process. Anderson, Mansi and Reeb (2004) report, for instance, that firms with large independent boards are associated with a lower debt financing cost, suggesting that outsider independence is an important element affecting the reliability of financial reports. Similarly, Klein (2002) finds that board independence is negatively related to earnings management by the firm, indicating that outsider-dominated boards are more effective in monitoring the corporate financial accounting process. Furthermore, Beasley (1996) and Uzun, Szewczyk and Varma (2004) note that a firm with a larger proportion of independent directors on the board is more likely to avoid financial statement fraud.

In contrast to the above views, Hermalin and Weisbach (1991) and Mangel and Singh (1993) reveal that, due to top management's control of the board-selection process, there is no relationship between board composition and performance. Singh and Davidson (2003) indicate that outside directors do not significantly reduce the agency problem. Agrawal and Knoeber (1996) claim to have found that outside board members have negative impact on firm value.

3. Data and methodology

3.1. Data

We employed a sample of 58 outside director announcements made by TSE listed firms during the period 1 January, 1999 to 30 June, 2003. All data were obtained from the Taiwan Economic Journal Data Bank (TEJDB). TEJDB contains information on stock prices, trading volume and financial statements. The announcement date is the date of the first appearance of the announcement in either the *Commercial Times* or *Economic Daily*. The sample size⁵ was not as large as that used by Rosenstein and Wyatt (1990) and Lin, Pope and Young (2003). This is because the outside director appointment is not mandatory in Taiwan. Most TSE listed firms have no outside director at all. This difference in legal environment provides an opportunity to examine whether the appointment announcement effect is different across countries

⁵ However, for the statistical analysis we carry out there are still sufficient degrees of freedom in estimation of key parameters.

and legal environments.

Table 1 presents the sample distribution with respect to industry and year. It shows that the number of outside director appointments has increased over time. The electronics industry has the most outside director appointments. This is because the electronics industry is the largest and the most internationalized industry in Taiwan. Pressure from international institutional shareholders has forced these firms to appoint outside directors.

Table 1
Sample distribution with respect to industry and year

Industry	1999	2000	2001	2002	2003	Total	Percentage
Plastic			1	1		2	3.45%
Textile					1	1	1.72%
Machinery	1	2	1	1	2	7	12.07%
Power Cable		1				1	1.72%
Chemicals					1	1	1.72%
Rubber					1	1	1.72%
Electronic				12	27	39	67.24%
Finance					4	4	6.90%
Others		1			1	2	3.45%
Total	1	4	2	14	37	58	100%

The variable descriptive statistics are described in table 2. The prior stock performance is measured by the cumulative abnormal returns from day -150 to day -31 (hereafter, PSP) and relative return on equity (hereafter, ROE). PSP ranges widely from -49.6% to 217.3% and ROE ranges from -38.03% to 33.26%. This wide PSP and ROE distribution provides a good opportunity to examine the relationship between corporate performance and outside director announcement effects. We also observed that most firms in our sample had no outside director before the appointment announcement. The maximum number is just 2. On average, there are only 0.19 outside directors in each firm. This indicates that the average number of outside directors for TSE listed firms is much smaller than that in some other stock markets such as the US, UK, Hong Kong and South Korea. For a stock exchange with over 400 billion US dollars market value, the outside director mechanism in Taiwan is still in its infancy. In addition, the table tells that 19% of sample firms' CEOs are also chairmen of their boards, and the average institutional shareholder ownership is 38.36%.

Table 2

Descriptive statistics

Variables	Mean	Med	Std	Min	Max
Operating performance :					
Prior Stock Performance (PSP)	0.074	-0.010	0.435	-0.496	2.173
Returns on equity (ROE)	5.696	5.635	13.094	-38.030	33.260
Original board structure :					
Existence of outside director (ODD)	0.121	0	0.329	0	1
Number of outside directors (ODN)	0.190	0	0.545	0	2
Ratio of number of outside directors to total board members (ODR)	2.090	0	6.089	0	28.571
The CEO as chairman of board (CEO)	0.190	0	0.395	0	1
Free cash flow (FCF)	0.090	0.093	0.119	-0.352	0.376
Information asymmetry :					
Research and development expenditures (RD)	4.496	5.089	2.126	0	7.306
Firm age (EST)	7038.776	6519.5	3970.829	343	16914
Length of time of firm's listing (LIS)	1967.862	1180	2255.416	264	11963
Degree of diversification (DIV)	0.956	0.999	0.081	0.668	1
Institutional shareholder ownership (INT)	38.356	36.3	22.165	0	97.39
Ratio of equity book value to equity market value (BM)	0.766	0.638	0.489	0.173	2.850
Firm size (SIZE)	3.878	3.721	0.759	2.811	6.211

3.2. Methodology

3.2.1. Event Study

The market model based event study was used to calculate the abnormal returns. The window length was 30 days before and after the announcement day. The estimated period is from day -150 to day -31.

We first calculated the expected returns, \hat{R}_{it} , using the following market model:

$$\hat{R}_{it} = \hat{\alpha}_i + \hat{\beta}_i R_{mt} + e_{it}$$

where R_{mt} is the return of the market portfolio on day t ; $\hat{\alpha}_i$ and $\hat{\beta}_i$ are estimates of parameters α_i and β_i . The abnormal return, AR_{it} , is the difference between the real return and the expected return. Second, we calculate the cumulative abnormal returns of firm i from day t_1 to day t_2 with the following formula:

$$CAR_i = \sum_{t=t_1}^{t_2} AR_{it}$$

3.2.2. Firm characteristics and announcement effects

We then examined the relationship between the cumulative abnormal returns and firms' characteristics, including corporate performance, number of outside directors, the CEO as chairman of the board, free cash flow, degree of information asymmetry, and institutional investor ownership. Two control variables, the ratio of book value to market value of equity and the firm size, are also included in the equation. The regression model is as follows:

$$CAR_i(t_1, t_2) = \alpha + \beta_1 PER_i + \beta_2 OD_i + \beta_3 CEO_i + \beta_4 FCF_i + \beta_5 IA_i + \beta_6 INT_i + \beta_7 BM_i + \beta_8 SIZE_i + e_i$$

where $CAR_i(t_1, t_2)$ is the cumulative abnormal returns from t_1 to t_2 of firm i ; PER_i is the corporate performance of firm i ; OD_i is the board composition of firm i before announcement; CEO_i is a dummy variable indicating whether the CEO also held chairman of the board. FCF_i is the free cash flow of firm i . IA_i is the degree of information asymmetry in firm i . INT_i is the institutional shareholder percent ownership of firm i . BM_i is the ratio of book equity value to market equity value of firm i . $SIZE_i$ is the size of firm i .

We employed PSP and ROE as proxy for PER_i . PSP is the cumulative abnormal returns from day -150 to day -30 . ROE is the difference between firm's return on equity and industry's return on equity of the year prior to the announcement.

In addition, we used ODD, ODN and ODR to proxy for OD_i . ODD is a dummy variable that equals one if outside directors existed on the board prior to the announcement. Otherwise, it is zero. ODN is the number of outside directors prior to the announcement. ODR is the ratio of number of outside directors to total board members before the announcement. CEO_i is a dummy variable. It equals one when the CEO holds the position of chairman of the board. Otherwise, it is zero.

According to Lehn and Poulsen (1989), FCF_i is calculated as follows:

$$FCF_i = \frac{(INC_i - I_i - TAX_i - D_{ip} - D_i)}{E_i}$$

where FCF_i is the free cash flow of firm i . INC_i is the operating income before depreciation of firm i . I_i is the interest expense of firm i . TAX_i is the income tax of firm i . D_{ip} is the cash dividends from the preferred stocks of firm i . D_i is the cash dividends from the common stocks of firm i . E_i is the book equity value of firm i .

We employed RD, EST, LIS and DIV as the proxy for IA_i . RD is the logarithm for the firm's 3-year research and development expenditures prior to the announcement.

More R&D expenditures imply higher degree of information asymmetry. EST is the age of the firm. Datta et al. (2000) pointed out that greater firm age is associated with a lower degree of information asymmetry. LIS is the length of time of a firm's listing on the stock market. Similarly, a longer time period implies a lower degree of information asymmetry. DIV is the degree of diversification. DIV is measured by the value of the major operating income divided by the total income for the month prior to the announcement. A larger DIV means smaller degree of diversification, that is, a lower degree of information asymmetry.

INT is the institutional investor ownership percent at the end of the month prior to the announcement. BM is the ratio of book equity value to the market equity value of end of the quarter prior to the announcement. Size is the logarithm of the market equity value at the end of the quarter prior to the announcement.

3.2.3. Interaction analysis

We expected that the appointment would be more beneficial for a firm with greater agency problems and poorer corporate performance. This is because, from the investor viewpoint, the expertise and monitoring ability of outside directors enhances firm performance and reduces the agency problem. To examine such an interaction effect, we propose the following model:

$$\begin{aligned} CAR(t_1, t_2)_i = & \alpha + \beta_1 PER_i + \beta_2 PERD_i * OD_i + \beta_3 PERD_i * CEO_i \\ & + \beta_4 PERD_i * FCF_i + \beta_5 PERD_i * IA_i + \beta_6 PERD_i * INT_i \\ & + \beta_7 BM_i + \beta_8 SIZE_i + e_i \end{aligned}$$

where $PERD_i$ is the dummy variable of corporate performance for firm i . We used PSPD and ROED to proxy for $PERD_i$. The PSPD value was determined using firm's stock return. We ranked our sample firms using their prior stock performance PSP. PSPD equals 1 if the firm's rank was in the lower 50%. Otherwise it equals 0. Similarly, ROED equals 1 when a firm's relative return on equity ranks in the lower 50%; otherwise it equals 0. In addition, greater agency problems are presented by more free cash flow, higher degree of information asymmetry, lower institutional investor ownership, the CEO as chairman of the board, and a smaller number of outside directors on the board.

4. Empirical findings

This section presents our empirical results. We first examine the stock market reaction to the announcement of outside director appointments. We then investigate

the relationship between firm characteristics and their announcement effects. Finally, we study the impact of the interaction between agency problems and corporate performance on the announcement effects.

4.1. The stock market reaction to the announcement of outside director appointments

Although there are a great number of studies related to outside directors, only a few of them have examined the announcement effect. Rosenstein and Wyatt (1990) found significant positive excess returns with respect to outside director announcements on US firms. However, the cumulative abnormal returns are only 0.13%. Lin, Pope and Young (2003) found that the market reaction was insignificant based on the announcements made by UK firms. Can the appointment of an outside director increase firm value? We doubt that the announcement effect is underestimated. Since the outside director mechanism has prevailed in both the US and UK for a long period of time, a great number of outside directors are present on US and UK boards. The addition of a new appointment does not increase a firm value significantly due to decreasing marginal utility. To realize the original or real effect of the appointment, it is important to study the announcement effect when an outside director appointment is still rare on the board. In this paper, we examine the announcement effect of TSE listed firms. We expect that the market reaction would be positive. This is because an outside director appointment is not mandatory in Taiwan. Most firms have no or only one outside director. The original benefits brought by the outside director may be revealed.

Table 3
Cumulative abnormal returns of announcement of outside director appointments

Windows	CAR	t(CAR)
(-1~+1)	0.394	0.714
(-10~+10)	2.639	1.807*
(-15~+15)	3.320	1.872*
(-30~+30)	4.776	1.919*
(0~+30)	0.439	0.247
(-30~0)	4.225	2.382**

*significant at 10% level **significant at 5% level ***significant at 1% level

Table 3 presents that cumulative abnormal returns for all six windows are positive, CAR (-30,+30) reaching 4.776%. This indicates that the stock market positively responds to outside director announcements. Figure 1 describes the abnormal returns and cumulative abnormal returns from day -30 to day 30. The cumulative abnormal returns increased from day -30 to day 7. These findings imply

that an outside director's monitoring ability and expertise increases firm value. This is consistent with the hypothesis that outside directors are chosen in the interest of shareholders.

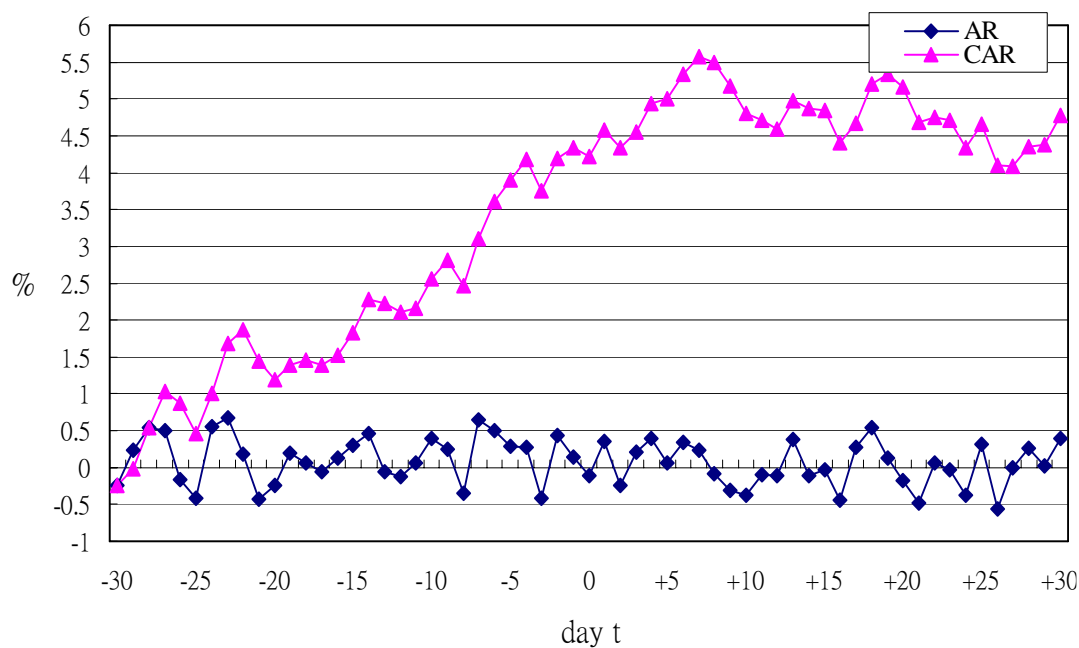


Figure 1 Announcement effect of appointment of outside director

Different from Rosenstein and Wyatt (1990) and Lin, Pope and Young (2003), our empirical findings are significant both economically and statistically. This is consistent with our hypothesis that outside appointment marginal utility for the firm decreases as more appointments are made and the announcement effect can vary across countries depending on initial conditions. In our sample, most announcements are the firms' first outside director appointment. The findings indicate that the original effect of the appointment is positive and significant. Outsiders' expertise and monitoring increases firm value. In addition, the appointment is more beneficial for a country with greater agency problems like Taiwan.

4.2. The relationship between the announcement effect and characteristics of a firm

Some studies find that the extent of the announcement effect is different across firms due to their differences in characteristics. Lin, Pope and Young (2003), for instance, find that share prices respond more favorably to appointment announcement when board ownership is low. Rosenstein and Wyatt (1990) indicated that the announcement effect is associated with the outside board members' occupations.

Extending their works, we further examined the relationship between the announcement and firm characteristics.

Six characteristics were chosen including corporate performance, number of outside directors, the CEO as chairman of the board, free cash flow, degree of information asymmetry, and institutional investor ownership. Corporate performance is a good variable to examine whether outsiders' monitoring ability and expertise are beneficial for the firm. We expected that the stock price would respond more favorably to the announcement when the firms' performance is poor. This is because a poor performing firm benefits more from an outsiders' expertise. A board with outside directors is more likely to remove poor performing managers. The second characteristic, number of outside directors, is a good indicator to examine whether the marginal benefit of the outside director is decreasing. The rest of the characteristics are related to agency problems. Lin, Pope and Young (2003) stated that the greater the firms' agency problems, the more beneficial outside directors would likely be. Since greater agency problems are associated with more free cash flow, higher degree of information asymmetry, lower institutional investor ownership, and CEO as chairman of the board, we predict that such firms will benefit more from the appointment.

Table 4 shows that the PSP coefficient is significantly negative. This means that poorer corporate performance will benefit more from the appointment. The result could be because investors expect outsiders with monitoring ability and expertise to remove poor performing managers and give advice to management. The value of a poor performing firm may increase significantly after an outside director appointment. We also observed that when the CEO held the position of chairman of the board, the market reaction to the announcement was positive. This is because such firms have greater agency problems. The independence and objectivity of the board declines when the board chairman is CEO. Monitoring the managers is less effective. The introduction of a new outside director can increase the monitoring power and, hence, reduce the agency problem under such initial conditions.

In (4) of table 4, FCF is significantly and positively related to CAR. This is consistent with Jensen (1986) that more free cash flows create greater agency problems due to overinvestment problems. Outside director expertise and monitoring can reduce such problems.

Table 4

Firm characteristics and their announcement effects CAR(0, +30)

This table presents the relationship between firms' characteristics and their announcement effects. The regression model is as follows:

$$CAR_i(0,+30) = \alpha + \beta_1 PER_i + \beta_2 OD_i + \beta_3 CEO_i + \beta_4 FCF_i + \beta_5 IA_i + \beta_6 INT_i + \beta_7 BM_i + \beta_8 SIZE_i + e_i$$

where CAR(0, +30) is the cumulative abnormal returns from day 0 to day +30; PER is the corporate performance; OD is the board composition before announcement; CEO is a dummy variable indicating whether CEO also holds the position of chairman of the board; FCF is free cash flow; IA is degree of information asymmetry; INT is institutional shareholder ownership; BM is the ratio of book equity value to market equity value; SIZE is the firm size.

Dependent variable: CAR(0,+30)

	(1)	(2)	(3)	(4)
Intercept	-43.866 (-3.156)***	-36.929 (-2.627)**	-13.933 (-0.549)	-54.044 (-3.497)***
PSP	-16.048 (-3.578)***	-16.005 (-3.363)***	-16.426 (-3.528)***	
ROE				-0.106 (-0.504)
ODD	-6.988 (-1.199)	-2.867 (-0.494)		-5.939 (-0.911)
ODN			-0.388 (-0.110)	
CEO	10.175 (2.102)**	10.194 (2.026)**	10.512 (2.081)**	10.940 (2.000)*
FCF	24.684 (1.312)	18.773 (0.955)	18.828 (0.966)	54.778 (2.443)**
RD		0.737 (0.794)		
LIS	-0.002 (-2.131)**			-0.002 (-2.222)**
DIV			-21.516 (-0.933)	
INT	0.019 (0.188)	0.034 (0.328)	0.018 (0.179)	0.048 (0.435)
BM	12.956 (2.533)**	9.361 (1.886)*	8.321 (1.672)	18.395 (3.315)***
SIZE	9.130 (2.872)***	6.057 (2.003)**	6.566 (2.148)**	9.647 (2.684)**
Adj R ²	0.333	0.281	0.280	0.163

Numbers in parentheses are t statistics. PSP and ROE are proxy for PER ; ODD and ODN are proxy for OD; RD, LIS and DIV are proxy for IA.

*significant at 10% level **significant at 5% level ***significant at 1% level

LIS is proxy for the degree of information asymmetry. Smaller LIS indicates higher degree of information asymmetry. The coefficient of LIS is significantly and negatively related to CAR. This result implies that the appointment is more beneficial for a firm with higher degree of information asymmetry. This could be because outside investors have difficulties overseeing a firm with higher information asymmetry. The outside director, who is considered to be more independent than other board members, can help investors to monitor the management and reduce the agency problem.

The coefficient of the control variable BM is significant and positive. This is consistent with the observation by Fama and French (1992) that BM ratio is positively related to stock returns. The coefficient of another control variable, SIZE, is also positive and significant. We interpret this result as revealing that a larger firm will

have a greater agency problem due to the more dispersed ownership structure. Therefore, the appointment of an outside director is more beneficial for a larger firm.

Table 5

Firm characteristics and their announcement effects CAR(-30, +30)

This table presents the relationship between firms' characteristics and their announcement effects. The regression model is as follows:

$$CAR_i(-30,+30) = \alpha + \beta_1 PER_i + \beta_2 OD_i + \beta_3 CEO_i + \beta_4 FCF_i + \beta_5 IA_i + \beta_6 INT_i + \beta_7 BM_i + \beta_8 SIZE_i + e_i$$

where CAR(-30, +30) is the cumulative abnormal returns from day -30 to day +30; PER is the corporate performance; OD is the board composition before announcement; CEO is a dummy variable indicating whether CEO also holds the position of chairman of the board; FCF is free cash flow; IA is degree of information asymmetry; INT is institutional shareholder ownership; BM is the ratio of book equity value to market equity value; SIZE is the firm size.

Dependent variable: CAR(-30,+30)

	(1)		(2)		(3)		(4)	
Intercept	-31.943	(-1.547)	-1.975	(-0.095)	-2.035	(-0.097)	-57.372	(-2.141)**
PSP	-38.309	(-5.749)***	-40.151	(-6.002)***	-40.298	(-5.956)***	-0.296	(-0.825)
ODD	-19.495	(-2.252)**	-20.339	(-2.287)**				
ODN							-9.832	(-1.438)
ODR					-0.987	(-2.049)**		
CEO	13.276	(1.846)*	11.609	(1.592)	12.899	(1.746)*	16.027	(1.704)*
FCF	15.824	(0.566)	13.765	(0.490)	11.162	(0.395)	89.257	(2.311)**
EST			-0.002	(-2.220)**	-0.002	(-2.123)**		
LIS	-0.003	(-2.375)**					-0.004	(-2.292)**
INT	-0.049	(-0.334)	-0.042	(-0.281)	-0.055	(-0.366)	0.020	(0.105)
BM	10.641	(1.400)	5.006	(0.704)	5.005	(0.696)	23.964	(2.495)**
SIZE	9.821	(2.080)**	4.573	(1.055)	4.518	(1.031)	11.254	(1.809)*
Adj R ²	0.446		0.439		0.428		0.078	

Numbers in parentheses are t statistics. PSP are proxy for PER ; ODD, ODN and ODR are proxy for OD; EST and LIS are proxy for IA.

*significant at 10% level **significant at 5% level ***significant at 1% level

Table 5 shows the regression analysis results with the dependent variable, CAR (-30,+30). CAR (-30,+30) is chosen as the dependent variable because, in table 3, CAR(-30,+30) is the largest among all 6 values. We observe that the coefficients of both ODD and ODR are significantly negative. ODD is a dummy variable that equals one if outside directors existed on the board prior to the announcement. Otherwise, it is zero. ODR is the ratio of the number of outside directors to the total number of board members before the announcement. The negative ODD and ODR coefficients indicate that the value of an additional outside director decreases as the total number

of outside director increases. This, again, is consistent with our thought that the marginal utility of appointment decreases as the number of outside director increases. The rest of the findings are similar to those in Table 4.

To summarize the findings of Table 4 and Table 5, the announcement effects are indeed causally related in various ways indicated above to firm performance, original board structure, the CEO as chairman of board, free cash flow, and degree of information asymmetry.

4.3. The interaction between corporate performance and agency problems

We also examine the impact of interaction between corporate performance and agency problems on the announcement. We expect that a poor performing firm with higher agency cost benefits more from the outside director appointment. This is because outside directors' expertise and monitoring reduce the agency problem and enhance corporate performance. Our variables related to agency costs include board structure, CEO as chairman of the board, free cash flow, degree of information asymmetry and the institutional shareholder ownership.

The proxy for corporate performance contains PSP and ROE. For convenience of examining the interaction effect, we also employed two dummy variables, PSPD and ROED, to proxy for corporate performance. We rank our sample firms by their PSP. PSPD equals 1 if the firm's rank is in the lower 50%. Otherwise it equals 0. Similarly, ROED equals 1 when a firm's relative return on equity ranks in the lower 50%. Otherwise it equals 1.

In Table 6, the coefficient of PSP is significantly negative. This indicates that the announcement is beneficial for the poor performance firm.

As to the interaction effect, $PSPD*ODR$ is negatively related to CAR, which implies that a poor performing firm with low outside director rate benefits much more from outsiders' monitoring and advice. In addition, the $PSPD*RD$ is positively and significantly related to CAR. RD is the research and development expenditure proxy for information asymmetry. Larger RD indicates higher degree of information asymmetry. The positive coefficient of $PSPD*RD$ states that the appointment is beneficial for a poor performing firm with high degree of information asymmetry. This implies that investors desperately need an outside directors' help to monitor the management, remove poor performing managers and enhance corporate performance.

Table 6

The interaction between corporate performance (PSPD) and agency problems

The impact of interaction between corporate performance and agency problems on the announcement effects is presented in this table. The regression model is as follows:

$$CAR_i(-30 \sim +30) = \alpha + \beta_1 PSP_i + \beta_2 PSPD_i * OD_i + \beta_3 PSPD_i * CEO_i \\ + \beta_4 PSPD_i * FCF_i + \beta_5 PSPD_i * IA_i + \beta_6 PSPD_i * INT_i \\ + \beta_7 BM_i + \beta_8 SIZE_i + e_i$$

where $CAR(-30, +30)$ is the cumulative abnormal returns from day -30 to day +30; PSP is the cumulative abnormal returns from day -150 to day -30; OD is the board composition before announcement; CEO is a dummy variable indicating whether CEO also holds the position of chairman of the board; FCF is free cash flow; IA is degree of information asymmetry; INT is institutional shareholder ownership; BM is the ratio of book equity value to market equity value; SIZE is the firm size; The value of PSPD is determined by firm's stock return. We rank our sample firms by their prior stock performance PSP. PSPD equals 1 if the firm's rank is in the lower 50%. Otherwise it equals 0.

Dependent variable: $CAR(-30,+30)$

	(1)		(2)		(3)	
Intercept	-6.636	(-0.346)	-6.554	(-0.342)	21.163	(0.885)
PSP	-31.553	(-3.831)***	-31.522	(-3.826)***	-3.668	(-0.362)
PSPD*ODD			-7.868	(-0.767)		
PSPD*ODN	-4.496	(-0.779)				
PSPD*ODR					-1.214	(-1.935)*
PSPD*CEO	11.585	(1.051)	11.165	(1.020)	19.861	(1.440)
PSPD*FCF	-57.472	(-1.395)	-56.340	(-1.361)	59.458	(1.187)
PSPD*RD	3.099	(1.728)*	3.080	(1.714)*		
PSPD*DIV					-0.090	(-0.007)
PSPD*INT	-0.033	(-0.189)	-0.029	(-0.166)	-0.094	(-0.411)
BM	0.285	(0.042)	0.126	(0.019)	-1.142	(-0.137)
SIZE	2.541	(0.616)	2.545	(0.616)	-4.390	(-0.860)
Adj R ²	0.396		0.395		0.062	

Numbers in parentheses are t statistics. PSP are proxy for PER ; ODD, ODN and ODR are proxy for OD;RD, and DIV are proxy for IA.

*significant at 10% level **significant at 5% level ***significant at 1% level

Table 7 presents the interaction effect with the corporate performance proxy ROE. ROE is negatively related to CAR. This, again, indicates that the appointment is good for a poor performing firm.

The coefficient of ROED*FCF is positive and significant. This implies that the announcement is beneficial for a poor performing firm with more free cash flow. The outside director can help shareholders to prevent the management from overinvesting in inappropriate projects, remove incompetent managers and supervise the management to enhance firm performance. In addition, we find that ROED*EST, ROED*LIS and ROED*DIV are all negatively related to CAR. EST, LIS and DIV are all proxy for information asymmetry. EST is age of the firm. Greater firm age is associated with lower degree of information asymmetry. LIS is the length of time of a firm's listing on

the stock market. Similarly, longer time period implies lower degree of information asymmetry. DIV is degree of diversification. Larger DIV means smaller degree of diversification, that is, lower degree of information asymmetry. Negative coefficients of ROED*EST, ROED*LIS and ROED*DIV all imply that, again, the appointment is beneficial for a poor performing firm with a higher degree of information asymmetry.

Table 7

The interaction between corporate performance (ROED) and agency problems

The impact of interaction between corporate performance and agency problems on the announcement effects is presented in this table. The regression model is as follows:

$$CAR_i(-30 \sim +30) = \alpha + \beta_1 ROE_i + \beta_2 ROED_i * OD_i + \beta_3 ROED_i * CEO_i + \beta_4 ROED_i * FCF_i + \beta_5 ROED_i * IA_i + \beta_6 ROED_i * INT_i + \beta_7 BM_i + \beta_8 SIZE_i$$

where CAR(-30, +30) is the cumulative abnormal returns from day -30 to day +30; ROE is the difference between firm's return on equity and industry's return on equity of the year prior to the announcement; OD is the board composition before announcement; CEO is a dummy variable indicating whether CEO also holds the position of chairman of the board; FCF is free cash flow; IA is degree of information asymmetry; INT is institutional shareholder ownership; BM is the ratio of book equity value to market equity value; SIZE is the firm size; ROED equals 1 when a firm's relative return on equity ranks in the lower 50%; otherwise it equals 0.

Dependent variable: CAR(-30,+30)

	(1)		(2)		(3)		(4)	
Intercept	-7.620	(-0.317)	0.314	(0.013)	0.314	(0.013)	-36.895	(-1.492)
ROE	-0.341	(-0.972)	-0.759	(-1.831)*	-0.759	(-1.831)*	-0.286	(-0.817)
ROED*ODD			-0.397	(-0.042)			-20.301	(-1.025)
ROED*ODN					-0.397	(-0.042)		
ROED*ODR	-1.179	(-1.204)						
ROED*CEO	-16.569	(-0.892)	-5.916	(-0.310)	-5.916	(-0.310)	-15.534	(-0.831)
ROED*FCF	98.664	(2.290)**	78.083	(1.843)*	78.083	(1.843)*	93.248	(2.164)**
ROED*EST	-0.003	(-2.980)***						
ROED*LIS							-0.005	(-2.850)***
ROED*DIV			-42.315	(-2.866)***	-42.315	(-2.866)***		
ROED*INT	0.004	(0.018)	0.125	(0.525)	0.125	(0.525)	-0.208	(-1.113)
BM	18.331	(2.051)**	15.507	(1.768)*	15.507	(1.768)*	20.539	(2.216)**
SIZE	3.055	(0.586)	3.494	(0.668)	3.494	(0.668)	9.863	(1.823)*
Adj R ²	0.109		0.098		0.098		0.097	

Numbers in parentheses are t statistics. ROE are proxy for PER ; ODD, ODN and ODR are proxy for OD; EST, LIS and DIV are proxy for IA.

*significant at 10% level **significant at 5% level ***significant at 1% level

5. Conclusions

Recent empirical findings indicate that the stock market reaction to outside director appointment announcements is economically insignificant. Lin, Pope and Young (2003), for example, find that the market reaction is insignificant based on a sample of UK firms. Rosenstein and Wyatt (1990), employing 1251 outside director announcements in US firms, find significant positive excess returns with respect to the announcements but with only 0.13% cumulative abnormal returns.

We conjecture that such empirical findings result from the decrease in marginal utility of outside directors to the firm among other important corporate governance related initial conditions. The outside director mechanism has prevailed in the US and UK for a long period of time. Most firms have many outside members on their boards. The addition of a new outsider may not significantly increase firm value.

However, in Taiwan, the appointment of an outside director is not mandatory. Most firms have no or only one outside director. The announcement of an outside director appointment can reflect the value of an outside director's expertise and monitoring ability. We employ a sample of 58 outside director announcements made by TSE listed firms during the period 1 January, 1999 to 30 June, 2003. Our empirical findings indicate that a significantly positive reaction exists to the announcement. The cumulative abnormal returns reached 4.776% during the sampling period. We also found that the abnormal returns were positive and higher with respect to each of the following characteristics: poorer corporate performance, the CEO as chairman of the board, larger free cash flow, and higher degree of information asymmetry.

These findings indicate that the market expects an outside director to remove incompetent managers or advise management to enhance firm performance; increase board independence and objectivity when CEO holds the position of chairman of the board; ease the overinvestment problem when free cash flow is high; and reduce the agency problem associated with information asymmetry. Furthermore, we find that the announcement effect tends to decrease as number of outside director increases.

Our findings are different from those of Lin, Pope and Young (2003) and Rosenstein and Wyatt (1990) mainly because the outside director appointment is not mandatory in Taiwan. This also suggests that the announcement effects could be different across countries as initial conditions may vary among them. The announcement effect seems to be causally associated with the corporate governance environment. The poorer the country's initial corporate governance mechanism, the stronger the announcement effect is likely to be.

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