IPO Underpricing, CEO duality, and Board Size: Factors that Affect Board Chair Change

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ABSTRACT

This study explores some of the factors that affect board chair change within three years after initial public offering (IPO). In Taiwan and other emerging economies, controlling shareholders usually occupy board chair positions and control the firms. Thus change in board chairs may mean controlling shareholders losing their control rights. Because control rights protect property rights and bring private benefits for controlling shareholders, controlling shareholders may like to adopt some strategies to defend their control rights in the IPO process. Using data from 525 IPO firms listed in Taiwan during 2000-2005, this study finds that IPO underpricing, CEO duality, and smaller board size all decrease the likelihood of board chair change, suggesting that these are all possible means for controlling shareholders to defend their control rights in the IPO process. The results of this study are consistent with those of prior research that argues that the main agency problem in Taiwan and other emerging economies are not between shareholders and top managers but between controlling shareholders and minority shareholders.

Keywords: IPO underpricing; CEO duality; board size; board chair change; CEO change

INTRODUCTION

It has been argued that there are private benefits of control in firms that controlling shareholders may use their control rights to enrich themselves at the expense of minority shareholders (Anderson & Reeb, 2004; Perez-Gonzalez, 2006), particularly in emerging economies where formal institutions that protect minority shareholders are weak (La Porta, Lopez-de-Silanes, & Shleifer, 1999; Claessens, Djankov, & Lang, 2000; Young, Peng, Ahlstrom, Bruton & Jiang, 2008; Peng, Wang, & Jiang, 2008; Lin & Chuang, 2011). However, initial public offering (IPO) transfers a firm from closely held to publicly traded, which may jeopardize the control rights of the controlling shareholders. Given the private benefits of control, controlling shareholders may like to defend their control rights in the IPO process. In this study we investigate some possible means that controlling shareholders use to retain their control rights in the IPO process.

Moreover, although past research has recognized the importance of chief executive officer (CEO) succession and has studied its antecedents and consequences (Wiersema & Zhang, 2011; Zhang, 2008; 2006; Perez-Gonzalez, 2006; Alexander, Fennell, & Helpern, 1993; Ocasio & Kim, 1999; Daily and Dalton, 1995), most of these research used data from the United States where ownership (shareholders or board of directors) and control (CEOs) are separated, and a CEO is an independent decision maker, whose performance is evaluated by the board. Therefore, change in CEOs may result from their poor performance dissatisfying shareholders and boards. However, in countries outside the United States, ownership is usually concentrated, and CEOs are usually identical or affiliated to the controlling shareholders (La Porta et al., 1999; Claessens et al., 2000; Young et al., 2008). In this situation, change in CEOs may be a result of controlling shareholders losing their control rights. Therefore, past research using data from the United States may not be applicable to other countries where ownership and control are more convergent. In countries outside the United States, the controlling shareholders and their family members usually occupy top management positions such as CEO and board chair and will not leave because of the private benefits of control. Although factors such as low performances and analysts’ negative opinions may increase the likelihood of CEO dismissal (Wiersema & Zhang, 2011; Cowen & Marcel, 2011; Daily & Dalton, 1995), dismissal may not happen if firms are tightly controlled.

In this study, we examine three possible means employed by controlling shareholders to retain their control rights and to reduce the likelihood of board chairs being replaced in the IPO processes: IPO underpricing, CEO duality, and
reduced board size. Past studies have suspected that IPO shares are strategically underpriced by the controlling shareholders to extract oversubscription of these IPO shares, which ignites the lottery process that discriminates large subscribers from purchasing large-block shares that could potentially threaten the control rights of the incumbent controlling shareholders (Brennan & Franks, 1997; Smart & Zutter, 2003; Lin & Chuang, 2011). This study provides further evidences to this hypothesis and finds that IPO underpricing may defend the control rights of the incumbent controlling shareholders and decrease the likelihood of board chairs being replaced within three years after the IPO.

CEO duality, which occurs when the board chair also serves as the CEO of the firm, may also protect the control rights of the incumbent controlling shareholders. CEO duality increases the power of the controlling shareholder, who usually serves as the board chair. When this board chair also occupied the CEO position, the controlling shareholders become more entrenched, and could more easily hide firm information that is detrimental to their control power (Lin, 2012). Therefore, their control rights are defended.

Although some past research has reported a smaller board is more efficient in playing its monitoring role (Andres, Azofra, & Lopez, 2005; Eisenberg, Sundgren, & Wells, 1998), this research argues that a smaller board is more easily controlled by the controlling shareholders, and thus board size is positively associated with the likelihood of losing control rights and board chair succession.

In this study, we use data from 525 IPO firms in Taiwan to examine whether IPO underpricing, CEO duality, and board size are associated with board chair succession. Following prior research, this study assumes that institutions in Taiwan are weak and minority shareholders are not well-protected, as in other emerging economies (Luo & Chung, 2005; Luo, Chung, & Sobczak, 2009; Lin & Chuang, 2011; La Porta, Lopez-de-Silanes, & Shleifer, 1999; Claessens, Djankov, & Lang, 2000; Peng, Wang, & Jiang, 2008; Young, Peng, Ahlstrom, Bruton, & Jiang, 2008; Chang, 2003). At this time, conflicts between two levels of principals – controlling shareholders and minority shareholders (often called principal–principal conflicts), become the main corporate governance problem, rather than traditional principal-agent problems that arise between shareholders and managers (Peng, 2011; Peng et al., 2008; Young et al., 2008). Therefore, board chairs, called dong shih chang in Taiwan, who may represent the controlling shareholders, become the most powerful persons in firms, playing the roles like CEOs in the United States (Luo et al., 2009). Thus, change in board chairs may indeed mean change in firm control.

THEORY AND HYPOTHESES

IPO underpricing is usually defined as the closing price of the first trading day after the IPO minus the predetermined offer price, divided by the offer price. The closing price of the first trading day may represent the stock price evaluated by market investors, and the offer price is negotiated by underwriter and the IPO firm. Larger IPO underpricing means the offer price is much lower than the price evaluated by market investors. Because subscribers and the underwriter pay offer price for the IPO shares to the IPO firm, IPO underpricing reduces the capital received by the IPO firm and increase its costs of capital.

Past studies have argued that IPO shares are strategically underpriced by the directors and controlling shareholders to induce oversubscription of these shares. Oversubscription then ignites the lottery process. The lottery process discriminates large subscribers from purchasing large-block shares because a large subscriber represents only one subscriber. When large-subscribers cannot purchase large-block shares, the control rights of the managers, directors, and incumbent controlling shareholders are successfully defended in the IPO process (Brennan & Franks, 1997; Smart & Zutter, 2003; Lin & Chuang, 2011). Therefore, IPO underpricing may secure the control rights of the incumbent controlling shareholders and decrease the likelihood of board chairs being replaced within three years after the IPO. Hypothesis 1: IPO underpricing is negatively related to the likelihood of board chair change.

CEO duality occurs when the board chair also serves as the CEO of the firm. CEO duality increases the power of the board chair, who is usually the controlling shareholder of the firm she/he serves. When this board chair also occupied the CEO position, the controlling shareholders become more entrenched, and could more easily conceal firm information that is detrimental to their control power than otherwise (Lin & Chuang, 2011). Therefore, CEO duality increases the power of the board chairs to hide firm information and decrease the likelihood of board chair change.
Hypothesis 2: CEO duality is negatively related to the likelihood of board chair change.

Although some past research has reported that a smaller board size is associated with better performance, we could not understand the underlying reasons of this relationship. A popular explanation is that a smaller board may increase the efficiency of board meetings and enhance the monitoring function of the board, thus is associated with better performance (Andres, Azofra, & Lopez, 2005; Eisenberg, Sundgren, & Wells, 1998). However, a smaller board may also increase firm performance because it is more easily controlled by the controlling shareholders (through bribes and stronger social ties among board members; Granovetter, 1973; 1985; 1992) and thus decision speed is increased. If the first reason is true, a smaller board can increase the monitoring function of the board and mitigate principal-agent (shareholders - CEO) conflicts and increases the likelihood of CEO being changed. However, if the second reason is true, a smaller board may undermine monitoring functions of the board, increase the control power of controlling shareholders, reinforce principal-principal (controlling shareholders- minority shareholders) conflicts, and decrease the likelihood of board chair being changed.

This research argues that in emerging economies such as Taiwan, the second reason may be true. A smaller board is more easily controlled by the controlling shareholders, which, though may enhance the speed of decisions, may increase the degree of entrenchment of the controlling shareholders and decrease the likelihood of board chair change. By contrast, a larger board is uneasy to be controlled by the board chair and controlling shareholders, decreasing the power of board chair and increasing the likelihood of board chair change.

Hypothesis 3: Board size is positively related to the likelihood of board chair change.

METHODS

Sample and Data Collection

For our study, we examine all 547 IPOs conducted in Taiwan from 2000 to 2005. Firms listed in both the TSE and the GreTai Securities Market (the over-the-counter market) are included. However, 14 firms transferred from the GreTai Securities Market to the TSE are excluded from our IPO sample because the market prices of these shares were disclosed in the GreTai Securities Market, unlike other IPOs whose market prices were not revealed previously. Eight cases with missing data are also excluded. Therefore, we end up with 525 IPOs.

We chose the time frame of 2000 to 2005 for our study. The impact of the Asian financial crisis of 1997 lasted from 1996 to 1999. Before the global financial crisis of 2007, there was a financial bubble in 2006; both events could influence IPO underpricing and the likelihood of CEO succession dramatically (Ljungqvist & Wilhelm, 2003). Therefore, we chose IPOs from 2000 to 2005, a relatively stable period, as our sample.

Measures

Dependent variable. The dependent variable in this study is the incidents of board chair succession within three years after the firm’s IPO. If the board chairs changed at least one time within three years after IPO, the dependent variable is coded as one (y=1); otherwise it is coded as zero (y=0). The name of the board chair of a firm is required to be disclosed and hence changes in board chairs are publicly available information. We use the data collected by the Taiwan Economic Journal.

Independent variables. IPO underpricing is usually calculated as the closing price on the first trading day minus the offer price, divided by the offer price (Arthurs et al., 2008; Certo et al., 2001; Filatotchev & Bishop, 2002; Ljungqvist & Wilhelm, 2003). This figure represents percentages of difference between the market price (the closing price on the first trading day) and the offer price. However, in some cases, the closing price of the first trading day could not represent the market price in Taiwan because of the constraint that the price change could not exceed plus or minus seven percent of the closing price on the last trading day (or the offer price, in the case of an IPO) before 2005. If the market price exceeded the offer price by more than seven percent, it could not be revealed on the first trading day. Therefore, we further use the closing price on the second and third trading days to measure market price and calculate the IPO underpricing (Lin & Chuang, 2011).

CEO duality is a binary variable. When the board chair also serves as the CEO of the IPO firm, 1 is coded;
otherwise 0 is coded.

Consistent to prior studies, board size is the number of directors on the board at the end of the pre-IPO year (Andres et al., 2005; Eisenberg, Sundgren, & Wells, 1998).

Several control variables are introduced in our empirical analysis. Total value of shares underwritten in the IPO is controlled because increasing the size of the offer may decrease the price, according to the law of demand. Debt ratio is calculated as total debt divided by total assets at the end of the pre-IPO year. It represents the capital structure of the firm and may influence agency problems between shareholders and creditors (Jensen & Meckling, 1976). Size is the natural log of the total assets of the IPO firm at the end of the year before the IPO. Firm age is the number of years from the establishment of the IPO firm to the IPO date. ROA is the average returns on assets of three years after the IPO. ROA is controlled because past research has reported that performance is an important factor that affects CEO change (Daily & Dalton, 1995).

The sample firms are categorized into three industries – electronics, biotechnology, and other industries. Most of our sample firms (387 firms) operate in the electronics industry; 28 firms are in biotechnology; and the remaining 110 firms are categorized as other industries. Therefore, two industry dummies are introduced. Additionally, we employ a dummy variable to distinguish the TSE and GreTai Market. If a firm is listed in the GreTai Market, the dummy variable is coded as 1; otherwise, 0 is coded. Finally, five-year dummy variables are included in our models because our data span six years (2000–2005).

Statistical model

The following logistic regression is used to test the factors affecting the likelihood of board chair change within three years after IPO.

\[ P(y = 1|x) = \frac{1}{1 + e^{-x\beta}} \]

If board chair is changed, y=1 is coded; otherwise, 0 is coded. x denotes a vector of explanatory variables, and \( \beta \) denotes the vector of coefficients.

RESULTS

Table 1 demonstrates the descriptive statistics, correlations, and variance inflation factors (VIFs) of our empirical models. Because the correlation coefficients among independent variables are all low, and the no VIFs exceed five, multicollinearity is not a serious problem in our empirical models.

Table 2 exhibits the results of logistic regression for chair change. Model 1 includes only control variables. The effects of IPO underpricing, Board size, and CEO duality are added in Model 2, Model 3, and Model 4. In Model 2, IPO underpricing is calculated as the closing price of the first trading day minus offer price and then divided by offer price. In Model 3 and Model 4, the closing price of the first trading day is substituted by those of the second day and third day, respectively.

Model 2 to Model 4 all disclose significant negative effects of IPO underpricing and the likelihood of CEO change, supporting H1. CEO duality has very strong significant negative effects on CEO change in all Model 2, Model 3, and Model 4, supporting H2. Board size shows strong significant positive effects on CEO change in all Model 2, Model 3, and Model 4, supporting H3. Thus, all the hypotheses in the study are supported.

DISCUSSION AND CONCLUSION

In countries where formal institutions that protect property rights are weak, firms usually have controlling shareholders who dominate firm decisions and occupy board chair positions. At this time, a board chair (called dong shih chang in Chinese) is a true strategic decision maker and not just a monitor of the general manager (called chung qing li) (Luo et al., 2009). Therefore, due to her/his strategic decision making role, board chair change is similar to CEO change in the United States, which could potentially influence firm strategies. Moreover, because board chairs usually
represent controlling shareholders, board chair change may mean that the controlling shareholders lose their control rights that protect their property rights and bring further private benefits of control for them.

However, IPO process change firms from closely held to publicly traded, endangering the control rights of the incumbent controlling shareholders. In this study, we find that controlling shareholders use IPO underpricing, CEO duality, and smaller board size to defend and enhance their control rights. As a result, IPO underpricing, CEO duality, and smaller board size make controlling shareholders more entrenched and could potentially result in principal-principal conflicts that controlling shareholders expropriate minority shareholders. Future research should explore in what situations minority shareholders are more protected or more expropriated.

Table 1: Descriptive statistics, correlations, and VIFs

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<td>-0.12**</td>
<td>-0.06</td>
<td>-0.05</td>
<td>-0.04</td>
<td>0.07</td>
<td>0.13**</td>
<td>-0.08</td>
<td>0.02</td>
<td>-0.24**</td>
<td>-0.12**</td>
<td>-0.13**</td>
<td>-0.12**</td>
<td>-0.10**</td>
<td>1.48</td>
<td></td>
</tr>
</tbody>
</table>

Two tailed tests.
*p<0.05; **p<0.01

Table 2: Results of logistic regression for the likelihood of board chair change

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-5.00**</td>
<td>-3.25†</td>
<td>-3.33†</td>
<td>-3.38†</td>
</tr>
<tr>
<td>(1.79)</td>
<td>(1.88)</td>
<td>(1.89)</td>
<td>(1.89)</td>
<td>(1.89)</td>
</tr>
<tr>
<td>Total value of underwritten shares</td>
<td>0.06</td>
<td>0.05</td>
<td>0.06</td>
<td>0.06</td>
</tr>
<tr>
<td>(0.18)</td>
<td>(0.19)</td>
<td>(0.19)</td>
<td>(0.19)</td>
<td>(0.19)</td>
</tr>
<tr>
<td>Debt ratio</td>
<td>-0.98</td>
<td>-0.73</td>
<td>-0.76</td>
<td>-0.77</td>
</tr>
<tr>
<td>(0.84)</td>
<td>(0.89)</td>
<td>(0.89)</td>
<td>(0.89)</td>
<td>(0.89)</td>
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<tr>
<td>Firm size</td>
<td>0.23</td>
<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
</tr>
<tr>
<td>(0.16)</td>
<td>(0.18)</td>
<td>(0.18)</td>
<td>(0.18)</td>
<td>(0.18)</td>
</tr>
<tr>
<td>Firm age</td>
<td>-0.01</td>
<td>-0.01</td>
<td>-0.01</td>
<td>-0.01</td>
</tr>
<tr>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>ROA</td>
<td>-0.03**</td>
<td>-0.03*</td>
<td>-0.03*</td>
<td>-0.03*</td>
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<tr>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
<td>(0.01)</td>
</tr>
<tr>
<td>Electronics</td>
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<td>0.18</td>
<td>0.19</td>
<td>0.20</td>
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<tr>
<td>(0.01)</td>
<td>(0.32)</td>
<td>(0.32)</td>
<td>(0.32)</td>
<td>(0.32)</td>
</tr>
<tr>
<td>Biotech</td>
<td>0.05</td>
<td>0.66</td>
<td>0.68</td>
<td>0.69</td>
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<tr>
<td>(0.53)</td>
<td>(0.55)</td>
<td>(0.55)</td>
<td>(0.55)</td>
<td>(0.55)</td>
</tr>
<tr>
<td>OTC</td>
<td>0.00</td>
<td>-0.06</td>
<td>-0.09</td>
<td>-0.09</td>
</tr>
<tr>
<td>(0.27)</td>
<td>(0.28)</td>
<td>(0.28)</td>
<td>(0.28)</td>
<td>(0.28)</td>
</tr>
<tr>
<td>Year 2001</td>
<td>0.28</td>
<td>0.39</td>
<td>0.41</td>
<td>0.43</td>
</tr>
</tbody>
</table>

70 The Journal of Global Business Management Volume 8 * Number 2 * August 2012
(0.42)  (0.45)  (0.45)  (0.45)
Year 2002
0.44  0.53  0.59  0.60
(0.40)  (0.42)  (0.43)  (0.43)
Year 2003
1.95 ***  1.95 ***  1.97 ***  1.98 ***
(0.39)  (0.42)  (0.42)  (0.42)
Year 2004
0.44  0.29  0.31  0.31
(0.44)  (0.46)  (0.46)  (0.46)
Year 2005
0.56  0.24  0.27  0.30
(0.61)  (0.64)  (0.64)  (0.64)
IPO underpricing-1st day
-0.03 *
(0.02)
IPO underpricing-2nd day
-0.03 *
(0.01)
IPO underpricing-3rd day
-0.02 *
(0.01)
CEO duality
-1.20 ***  -1.21 ***  -1.20 ***
(0.27)  (0.28)  (0.28)
Board size
0.13 **  0.13 **  0.13 **
(0.05)  (0.05)  (0.05)
-2LR
515.04  480.21  480.19  480.16
χ 2
58.94 ***  93.77 ***  93.79 ***  93.82 ***
Degree of freedom
13.00  16.00  16.00  16.00

N=525. One tailed tests for main variables; two tailed tests for control variables.
Standard errors are in the parentheses.
†p<0.1; *p<0.05; **p<0.01; ***p<0.001.

REFERENCES


