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Cash Holdings and Corporate Governance in Business Group Affiliated Firms

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Abstract. Using an integration of the agency theory with the institutional perspective and performing multivariate regression analyses, this paper aims to examine the relationship between corporate governance and corporate cash holdings for business group affiliated firms listed on the Taiwan Stock Exchange and in the Over-The-Counter market. The empirical results reveal that affiliated firms with stronger corporate governance, that have higher growth opportunities and operating cash flows, are small in size, have lower net working capital, are younger, and pay out more dividends, hold more cash than nonaffiliated firms.

Keywords: cash holdings, corporate governance, business group, diversification

1. Introduction

Business groups are an important feature of many emerging markets. Prior studies have recognized several theoretical perspectives to explain the emergence of such groups. Previous studies about business groups have analyzed the relationship business group affiliation and firm performance, innovation, and leverage policy (Khanna and Rivkin 2001; Manos et al. 2007). However, little attention has been directed to addressing business group effects on the cash holding decisions of affiliated firms. By using an integration of the agency theory with the institutional perspective (Singh and Gaur 2009) and performing multivariate regression analyses, this paper attempts to extend the research streams from the group factors and to examine the relationship between corporate cash holdings and business group effects. Besides, this paper employs Information Disclosure and Transparency Rankings System (IDTRS) rankings provided by the Securities and Futures Institute (SFI) in Taiwan as a proxy for the corporate governance index to investigate its effects both in terms of mitigating the agency costs and moderating the effect of group affiliation.

The empirical evidence reveals that affiliated firms with higher growth opportunities and operating cash flows, that are small in size, have lower net working capital, are younger, and that pay out more dividends hold more cash than nonaffiliated firms. The findings also show that more highly-diversified groups, more stock ownership holdings, the core entities, and groups with fewer listed firms hold lower cash balances. In addition, the results contribute to the corporate governance research by using IDTRS results as a proxy to measure the monitoring effect in corporate cash holdings.

2. Hypotheses Development

Business groups are an important business form in many emerging markets. Academic studies have recognized several theoretical perspectives to explain the emergence of such groups. These include the resource dependence view (Guillén 2000), institutional theory (Khanna and Palepu 1997, 2000a, 2000b) and transaction cost analysis (Luo and Chung 2005). According to these perspectives, business groups act as a social network to offer benefits to their affiliates and resolve the problems that arise from the imperfection of the emerging markets. Compared with the stand-alone counterparts, affiliated firms are more likely to

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acquire financial capital from an efficient business environment. Based on Chava and Purnanandam (2010) who consider the cash balance to be negative leverage, this paper proposes that the cash holding decisions of affiliated firms differ from those of nonaffiliated firms. Prior studies regarding cash holdings mainly focus on the determinants and their relationship with corporate governance (Opler et al. 1999; Harford et al. 2008). Corporate governance has emerged as an important issue for firms to mitigate Jensen's (1986) agency theory. The role of corporate governance in the unique context of emerging markets should be different from that in the case of the developed markets.

The prior literature basically examines the effect of corporate governance mechanisms on business decisions through various characteristics of the governance structure (Harford et al. 2008). In addition to these corporate governance mechanisms, corporate transparency and information disclosure practices are considered to be important attributes of a good corporate governance mechanism. Following Chi (2009), this paper employs Information Disclosure and Transparency Rankings System (IDTRS) rankings provided by the Securities and Futures Institute (SFI) in Taiwan to serve as a proxy for the corporate governance mechanisms, and expects that the rankings can help both mitigate the agency costs and moderate the group affiliation effects. Thus, this paper constructs the first and second hypotheses as follows:

H1: The firms affiliated to business groups are positively related to the cash holdings policy.

H2: The corporate governance mechanism is positively correlated with the affiliated firms' cash holdings.

Prior studies reveal that the characteristics of business groups could also influence the affiliated firms' cash holding policy (Manos et al. 2007; Hsieh et al. 2010). Following these studies, this paper highlights the group factors which influence corporate cash holdings in addition to the organizational characteristics of this paper mentioned above. The group characteristics include diversification, the number of listed firms affiliated to a group, inside ownership, and group core entity. Thus, this paper establishes the third hypothesis as follows:

H3: The business group characteristics are positively related to the cash holdings policy.

3. Data and Methods

3.1. Sample Data

The sample firms employed in this study include firms listed on the Taiwan Stock Exchange (TSE) and in the Over-The-Counter market (OTC) from 2005 to 2009. Data are collected from the Taiwan Economic Journal (TEJ) database. We drop the finance and insurance industries and government firms due to the unique nature of their regulations and requirements. After deleting firms with missing data, the final sample comprises a total of 4,983 firm-year observations of which 1,776 related to affiliated firms and 3,207 to nonaffiliated firms. The data for the 1,776 affiliated firm-year observations are used to construct group characteristics variables. To reduce the influence of outlier observations, all of the variables are winsorized at the 1^{st} and 99^{th} percentile levels.

3.2. Measures

Following Opler et al. (1999), this study employs the ratio of cash and short-term investments to total net assets to measure corporate cash holdings CAHO. The following are the definitions of the independent variables. Business group affiliation DBGA is measured by an indicator variable, which takes a value of one, if the firm belongs to a business group with at least two listed firms, and zero otherwise. Group diversification GDIV is defined as the number of industry lines represented in the business group with which the firm is affiliated (Manos et al. 2007). Group listed number GNUM is the number of listed firms affiliated to a group. Inside ownership GINS is measured as the percentage of an affiliated firm's common stock shares held by the affiliated business group (Kuan et al. 2010). Finally, group tie GCOR is a dummy variable that takes a value of one if the affiliated firm is the group's core entity, and zero otherwise.

The IDTRS evaluation system ranks the listed companies according to five grades, A^+, A, B, C, and C-, since the third evaluation year 2005. This paper sets CGI from 5 to 1 which corresponds to the company's ranking from grade A^+ to C-. A number of firm-specific control variables included in the regression models are all based on the existing literature. Specifically, this paper uses: (a) the natural logarithm of the firm's total assets SIZE to control for firm size; (b) NWC, which is the ratio of net working capital to non-cash assets; (c) DCD, which is the cash dividend payout divided by total assets; (d) the cash flow OCF ratio measured as operating income divided by total assets to control for liquidity; (e) the book value of debt plus the market value of equity divided by total assets MB as a proxy for investment opportunities; and (f) AGE, the natural logarithm of the number of years firms have been in operation.

4. Empirical Analysis

A total of 4,983 firm-year observations are included in the sample to test the hypotheses. Table 1 provides the descriptive statistics and the definitions of the related variables based on the sample. Table 1 indicates that on average the cash holdings ratio CAHO is 28.5% and the average net working capital ratio NWC is 9.4%. The mean of the natural logarithm of total assets SIZE is 6.628 and is quite stable over the period. The mean dividend payout ratio DCD is 0.03, and the mean value of the operating cash flows OCF is 0.077. The mean of the market-to-book ratio MB is 1.366, and the natural logarithm of the number of years firms have been in operation AGE is 1.351. The average governance rankings grade CGI is 3.021 and the grade is improved over the period 2005-2009. The mean value of the business group affiliation dummy variable BDGA is 0.356.

Table 1 Descriptive Statistics

Variable	Definitions	Mean	Median	Std. Dev.	1st Quintile	4th Quintile
CAHO	Cash and short-term investments to total assets	0.285	0.166	0.353	0.083	0.334
SIZE	Natural logarithm of total assets	6.628	6.550	0.603	6.195	6.957
NWC	Net working capital (current assets minus current liabilities) to non-cash assets	0.094	0.095	0.194	-0.027	0.225
DCD	Cash dividends payout to total assets	0.030	0.016	0.038	0.000	0.045
OCF	Operating cash flow to total assets	0.077	0.075	0.104	0.017	0.138
MB	Natural logarithm of the number of years firms have been in operation	1.366	1.124	0.777	0.900	1.553
AGE	The book value of debt plus market value of equity divided by total assets	1.351	1.362	0.221	1.204	1.519
CGI	Corporate governance index, from 1 to 5	3.021	3.000	0.735	3.000	3.000
DBGA	Group affiliation dummy variable that takes a value of 1 if a firm is affiliated to a group with at least two listed firms, and 0 otherwise	0.356	0.000	0.479	0.000	1.000

The table consists of 4,983 firm-year observations during the period 2005-2009.

To examine the relationship between corporate governance and the corporate cash holding policy, this paper first includes a business group affiliation dummy variable and control variables in the regression models. Next, this paper introduces the corporate governance index and the interaction term to the models. Finally, this paper contrasts affiliated with nonaffiliated firms, in an attempt to look for different characteristics and different levels of cash holdings. All models also include year dummy variables and the results are not tabulated.

The results of the cash holdings policy are provided in Table 2. The group affiliation dummy variable DBGA coefficients in Models 1, 2, and 3 are all positive and significant at the 1% level. The governance variable CGI coefficients in Models 2, 4, and 5 are all positive and significant at least at the 5% level. The governance variable and its interaction with the group affiliation dummy variable, the DBGA * CGI coefficient, in Model 3 is positive and significant at the 1% level. The findings also demonstrate that the effect of corporate governance on cash holdings is more significant among the affiliated firms and show that the IDTRS rankings serve as a proxy for the corporate governance mechanism that can help both mitigate the agency costs and moderate the effect of group affiliation. The evidence in Table 2 is similar to that in Harford et al. (2008) and supports the view that business group-affiliated firms with strong corporate governance hold higher cash balances. As for the control variables, the results are consistent with the prior literature (Opler et al. 1999; Chava and Purnanandam 2010). Collectively, these results suggest that affiliated firms with higher growth opportunities and operating cash flows, that are smaller in size, have lower net working capital, are younger, and pay out more dividends hold more cash than nonaffiliated firms.

This study further attempts to test how group-wide characteristics influence corporate cash holdings. This paper first includes group characteristics variables that show that firms are affiliated and control variables in all three regression models. Next, the corporate governance index is added in Model 2. Finally, the characteristics variables and corporate governance index interaction terms are introduced in Model 3. The group diversification GDIV, group listed number GNUM, inside ownership GINS, and group core company GCOR variables are the group characteristics variables that are included in the regression models. For brevity, this paper does not tabulate the results and the findings indicate that the group diversification, inside ownership, group core entity, and the GDIV, GINS, and GCOR coefficients in the regression models are all negative and significant at least at the 5% level. The group listed number of firms GNUM coefficients in the regression models are all positive and significant at the 5% level. The findings show that the more highly diversified groups, the firms with larger stock ownership holdings, the core entities, and lower listed number groups hold smaller cash balances. The CGI coefficients in Models 2 and 3 are all positive and significant at the 1% level and demonstrate that firms with stronger corporate governance actually have more cash reserves. The interaction term of the governance variable and the group core company CGI* GCOR enters with a negative and significant coefficient at the 10% level in Model 3. This provides weak evidence that core affiliated firms with stronger corporate governance mechanisms tend to hold less cash reserves. Overall, the results provide evidence in support of H1 and H2, and only weak support for H3.

Table 2 The Effects of Corporate Governance on Cash Holdings

	Dependent Variable: CAHO				
	Model 1 (Full Sample)	Model 2 (Full Sample)	Model 3 (Full Sample)	Model 4 (Affiliated Firms)	Model 5 (Nonaffiliated Firms)
INTERCEPT	1.055[a]	1.050[a]	1.106[a]	1.209[a]	1.016[a]
	(19.505)	(18.181)	(18.223)	(13.513)	(12.625)
DBGA	0.056[a]	0.051[a]	0.051[a]		
	(6.085)	(5.429)	(5.432)		
CGI		0.031[a]	0.017[b]	0.055[a]	0.015[b]
		(5.137)	(2.339)	(5.484)	(1.981)
DBGA* CGI			0.035[a]		
			(2.973)		
SIZE	-0.106[a]	-0.117[a]	-0.119[a]	-0.138[a]	-0.108[a]
	(-13.752)	(-14.141)	(-14.389)	(-11.537)	(-9.159)
NWC	-0.161[a]	-0.207[a]	-0.203[a]	-0.352[a]	-0.129[a]
	(-7.144)	(-8.491)	(-8.331)	(-8.120)	(-4.402)
DCD	2.636[a]	2.540[a]	2.546[a]	2.514[a]	2.564[a]
	(17.592)	(16.324)	(16.372)	(9.415)	(13.447)
OCF	0.415[a]	0.368[a]	0.370[a]	0.301[a]	0.410[a]
	(9.190)	(7.594)	(7.624)	(3.515)	(6.984)
MB	0.066[a]	0.067[a]	0.066[a]	0.074[a]	0.061[a]
	(9.881)	(9.325)	(9.265)	(6.203)	(6.798)
AGE	-0.203[a]	-0.202[a]	-0.202[a]	-0.224[a]	-0.187[a]
	(-10.025)	(-9.496)	(-9.485)	(-6.619)	(-6.804)
N	4,983	4,983	4,983	1,776	3,207
Adj. R^2	0.273	0.275	0.276	0.317	0.253
F Value	295.436[a]	237.565[a]	212.483[a]	118.506[a]	155.906[a]

Robust t-statistics are in parentheses. The symbols [a] and [b] denote statistical significance at the 1% and 5% levels, respectively. All variables are as defined in Table 1.

5. Conclusions

Using an integration of the agency theory with the institutional perspective, this paper examines the relationship between corporate governance and corporate cash holdings for business group affiliated firms listed on the Taiwan Stock Exchange and in the Over-The-Counter market from 2005 to 2009. This paper also attempts to extend the research streams from the group factors and examines the relationship between corporate cash holdings and business group effects. Besides, this paper employs IDTRS rankings as a proxy for the corporate governance index to investigate whether its effects both mitigate the agency costs and moderate the effect of group affiliation. The empirical evidence reveals that the affiliated firms with higher growth opportunities and operating cash flows, that are small in size, have lower net working capital, are younger, and pay out more dividends hold more cash than nonaffiliated firms. The findings show that the more highly diversified groups, those that have more stock ownership holdings, the core entities, and groups with lower numbers of listed firms hold smaller cash balances. In addition, the results contribute to the corporate governance research by using information transparency and the results of disclosure rankings as a good proxy for measuring the monitoring effect in corporate cash holdings.

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