CORPORATE GOVERNANCE AND CASH HOLDINGS: A COMPARATIVE ANALYSIS OF CHINESE AND INDIAN FIRMS

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ABSTRACT

In this study, we examine the impact of concentrated ownership on cash valuation and the level of cash holdings in firms the emerging nations of China and India. Agency theories suggest that firms with high levels of concentrated ownership are subject to greater extraction of private benefits from cash holdings. Our study utilizes Chinese firms data from 1993-2006 and Indian firms data from 2003-2006. We examine the relationship between firm valuation and cash holdings with different levels of governmental ownership concentration, family ownership levels and foreign ownership levels. Our findings show that Chinese firms with high levels of government ownership have larger cash holdings suggesting more opportunities for private benefits extraction thus leading to lower firm valuation. In contrast, we find that Indian firms with high level of family ownership have low cash holdings and record better performance. Chinese investors view governmental ownership as a determinant that reduces firm value. Indian investors see high levels of family ownership as a factor that enhances firm value. This study enhances the body of knowledge concerning the nature of cash holdings and firm value in emerging nations of China and India.

JEL: G31, G34

KEYWORDS: Cash Holdings, ownership structure, corporate governance, Chinese firms, Indian firms, firm valuation.

INTRODUCTION

The subject of corporate governance has gained added importance in recent years in part because of notoriety of such failures as Enron, Parmalat and others. Corporate governance encompasses the different relationships between parties with interests in a business organization. In recent years, the relationships between a large controlling shareholder and minority shareholders have attracted particular attention. Dyck and Zingales (2004) note that controlling shareholders can obtain some benefits that are not attainable by other shareholders. These benefits are known as the private benefits of control. The controlling party can extract private benefits by using company's money to pay for perquisites. The controlling shareholder may also extract private benefit by having exclusive access to private information the firm's business which in turn gives a significant advantage to the large shareholder over minority shareholders when making decisions based on the private information.

There are few accurate estimates of the type and magnitude of private benefits extracted by controlling shareholders. It is generally accepted that minority shareholders are better protected when private benefits of control are curbed and financial development is enhanced (Laporta et al., 1997). Recent corporate governance literature utilizes the measure of the size of firm cash holdings as a means of determining the degree of private benefit extraction (Jensen, 1986). Liquid assets such as cash can be converted into private benefits at lower cost (Myers and Rajan, 1998). Thus, controlling shareholders do indeed try to maximize their benefits and hold more liquid assets in countries in which it is easier to appropriate such private benefits, then minority shareholders should value liquid assets in those countries less than they do in countries where it is more difficult for majority shareholders to do so (Dittmar et al., 2003; Kalcheva

and Lins, 2007 and Pinkowitz et al., 2006). Investors will tend to discount the value of cash holdings if they expect controlling shareholders to partly consume cash holdings as private benefits and they will place higher value on dividends as a result (Pinkowitz et al., 2006).

Concentrated ownership in the form of family control or government control of public firms is common in Europe and East Asia. The value of control benefits is significant in these countries. In China, ownership of most listed companies is heavily concentrated in the Chinese government hands (Xu and Wang, 1999). The Chinese government is usually the controlling shareholder and as such significant inside information about the company is transmitted to the controlling shareholder. In India a high degree of ownership concentration exists in privately owned firms. Many of the Indian privately owned firms have a high level of family ownership. The existing high levels of concentrated ownership in both China and India provide a basis for studying the degree of private benefit extraction by controlling shareholders as well as the effect such extraction of benefits will have on firm valuation.

In this paper, we investigate 1) the impact of agency problems on the level of cash holdings in Chinese and Indian firms and 2) the effect of majority ownership concentration on Chinese and Indian investor's valuation of cash and dividends. The remainder of the paper is organized as follows: Section 2 is the literature review of previous studies. Section 3 covers the empirical hypotheses to be tested in the paper. Section 4 reports the results. Finally, section 6 concludes the paper.

LITERATURE REVIEW

The free cash flow hypothesis asserts that shareholders desire to limit managements' access to free cash flow in order to prevent shareholder-management conflicts (Jensen, 1986 and Stulz, 1990). The free cash flow hypothesis recognizes the tradeoff inherent in cash holdings, i.e., providing sufficient internal capital to managers to efficiently fund viable investment projects while at the same time curtailing management from excessive cash consumption fund projects and do perquisite consumption benefitting managers to the detriment of shareholders. If control is lacking, it is difficult, if not impossible, to convince self-interested managers to allow cash reserves to flow as benefits to shareholders.

Previous studies on cash reserves in the U.S. provide mixed evidence about the impact of large cash holdings on shareholders. Managers may hold cash for precautionary reasons (Opler et al., 1999). Mikkelson and Partch (2003) find that large cash holdings may improve firm value and do not create conflict of interest between managers and shareholders. Harford (1999) concludes that firms with large cash holdings have a greater propensity to make value-decreasing acquisitions. Dittmar and Mahrt-Smith (2007) find that shareholders assign diminished value to cash reserves and firms where it is likely that significant agency problems will be present at that firm. Faleye (2004) finds that the presence of significant excess cash reserves will likely lead to shareholder proxy contests which will ultimately result in executive turnover and greater cash distributions to shareholders. Thus a powerful incentive exists for managers to avoid large cash reserves.

In a study covering several countries, Dittmar, et al. (2003) find that in countries with greater shareholder protection, there are less firm cash holdings. This reflects shareholder desire to limit management's control over cash reserves. Minority shareholders value cash holdings less in countries with low shareholder protection (Pinkowitz, Stulz and Williamson, 2006). This is consistent with the hypothesis that poor shareholder protection will enable management and/or controlling shareholders to extract excessive private benefits from cash reserves. A similar conclusion was formed by Lins and Kalcheva (2007) finding that study how country-level investor firms with weak shareholder rights hold more cash which in turn bolsters the assertion that increased cash holdings can be abused by managers and/or controlling shareholders.

The effects of the state ownership on Chinese firm value have been covered in several studies (Wei and et al., 2003; Wei, Xie and Zhang, 2005). These studies suggest that firms with high government ownership

tend to engage in non-value maximization behavior. Wei, Xie and Zhang (2005) study the ownership structure and firm valuation in privatized Chinese firms from 1991-2001. They find that high levels of state ownership are negatively related to firm valuation. In addition, they report a convex relationship between Tobin's Q and state ownership and a positive relationship between institutional ownership and Q. Overall, their results suggest that when firms transition from state-owned firm to a privatized firm in which the government retains significant ownership, then the ensuing conflicts of interest which arise among different block shareholders causes firm value to decrease. D'Souza, Hassan, Wei and Varela (2003) study the pre- and post-privatization financial and operating performance of 208 Chinese firms from 1990-1997. They find that higher state ownership in Chinese firms result in decreased performance.

Khanna and Palepu (2000), find that insider ownership (a proxy for family ownership) is positively related to the performance of group affiliates and unaffiliated firms alike. In India, family-owned firms are considered to be reflective of a high level of product quality. Family ownership provides continuity of ownership because ownership is passed from generation to generation. Family-owned businesses are politically influential and have priority access to financial markets. Family-owned firms which are part of a business group may have additional access to internal capital if the group owns a bank or other financial institution. Sarkar and Sarkar (2000) find that Indian firm value increases if the holdings of directors exceed 25%. Also, they find no evidence of private benefit extraction in the studied Indian firms and they find a linear relationship between foreign ownership and company performance using the measure of rate of return on assets and return on sales.

Several factors have been found to influence the valuation of cash held by firms. Faulkender and Wang (2006) find that firm valuation of cash declines when firm policies direct the distribution of cash in the form of dividends – rather than repurchases. Dittmar and Mahr-Smith (2007) study the relationship between corporate governance and the value of cash holdings. They find that cash is more highly valued in well-governed firms as opposed to poorly-governed firms.

HYPOTHESIS DEVELOPMENT

According to LaPorta et al. (1999), firms controlled by large shareholders can encounter agency problems which pit the controlling shareholder against other minority shareholders. The controlling shareholder attempts to maximize his welfare by influencing the decision of management. When the controlling shareholder's interests are perfectly aligned with the interests of outside investors, then the outside investors benefit when the controlling shareholder takes actions which maximizes his welfare. However, when the interests of the controlling shareholder and outside investors are not perfectly aligned, then agency problems arise causing the controlling shareholder to maximize his welfare while at the same time harming the interests of outside investors. The benefits that the controlling shareholder extracts at the expense of other investors are referred to as the private benefits of control. The level of such benefits is in large part dependent on how well the interests of outside minority investors are protected in the firm's country. It should be noted that as a controlling shareholder obtains more private benefits, the outside investors' assessment of firm value falls.

In China, the government is the large controlling shareholder in large number of Chinese firms, while in India there is family ownership concentration in large number of firms, thus we hypothesize the following:

H_{1a}: The higher the level of government ownership in Chinese firms, the lower the firm value since the government will try to extract private benefits of control based on its relatively large ownership of firms. According to Brockman et al (2007), family owned firms in the United States exhibit superior performance and incur lower costs of capital relative to non-family firms. Also, the cash holdings of such firms are valued at premium over non-family firms. Anderson and Reeb (2003) and Villalonga and Amit

(2006) show that family ownership, control and management affect firm value positively. Therefore, we hypothesize the following:

H_{1b}: The higher the family ownership in firms in India, the higher the firm value since the concentrated family ownership will do its best to increase firm value and profitability.

In a world of perfect financial markets and no contracting costs, firms invest in all available positive net present value projects. They pay out the funds they cannot invest in such projects to shareholders. Funds paid to shareholders are funds that controlling shareholders cannot employ to further their own self interests. Controlling shareholders would alternatively use these distributed funds to increase their own personal wealth or to improve their controlling position in the firm. Thus, controlling shareholders prefer to keep funds in liquid assets because liquid assets can more readily be converted to private benefits of control. Liquid assets can immediately be invested in projects that provide personal benefit to controlling shareholders. As Myers and Rajan (1998) assert, it is easier to make cash disappear than to make a plant disappear. Therefore, we propose the following hypothesis:

H_{2a}: The higher the degree of government ownership in Chinese firms, the higher the likelihood of holding relatively higher levels of cash.

H_{2b}: The higher the degree of family ownership in Indian firms, the lower the likelihood of holding relatively higher levels of cash.

According to LaPorta et al., (2000b) firms experience greater pressure to pay dividends in countries providing poor investor protection because firm resources are more likely to be subject to the extraction of private benefits by controlling shareholders. In firms in a country with poor investor protection, shareholders gain when the firm pays out liquid assets in the form of dividends because such dividends can then be invested at a rate outside the firm which will be higher than the rate of return on the liquid assets invested inside the firm. This is due to the fact that the rate of return on assets invested inside the firm is reduced when the controlling shareholder extracts part of such assets in the form of private benefits of control. However, this reason is not true for family controlled firms, because family ownership is found to lower the agency costs between founding families and shareholders, thus there is better alignment of interests between families and shareholders; and the family ownership provides better monitoring on management (Brockman et al. 2007). From here, we hypothesize:

H_{3a}: Higher dividend payout ratios are valued higher in Chinese firms.

H_{3b}: Lower dividend payout ratios are valued higher in Indian firms.

DATA AND METHODOLOGY

The sample of firms used in this study is comprised of all the Chinese firms present in the CSMAR database during the period 1993-2006. In our sample, we excluded financial sector firms (banks, insurance companies, etc.) since their cash policies and accounting procedures differ from that of other industrial sectors. The sample consists of 1164 firms over a 14 year time span. The sample of Indian firms are composed of group affiliates and standalone private firms in the BSE 500 (Bombay Stock Exchange) index during 2003-2006 included in the PROWESS data base from the Centre for Monitoring the Indian Economy (CMIE). Our sample includes firms from the Manufacturing and Services industries only. The sample of Indian firms consists of 334 firms over the 5 year period. Both our samples are based on annual data.

In order to investigate the value of liquid assets and dividend payouts in firms with different government ownership levels, different family concentration levels and different foreign ownership concentration levels, we follow the regression model of Pinkowitz et al. (2006) that examines the relationship between firm related institutional factors and cash valuation. In our analysis, we use the sum of the market value of equity plus the book value of debt as a proxy for the value of the firm.

$$
\begin{aligned}
V_{i,t} = \alpha &+ \beta_1 E_{i,t} + \beta_2 dE_{i,t} + \beta_3 dE_{i,t+1} + \beta_4 dNA_{i,t} + \beta_5 dNA_{i,t+1} + \beta_6 RD_{i,t} + \beta_7 dRD_{i,t} \\
&+ \beta_8 dRD_{i,t+1} + \beta_9 I_{i,t} + \beta_{10} dI_{i,t} + \beta_{11} dI_{i,t+1} + \beta_{12} D_{i,t} + \\
&\beta_{13} dD_{i,t} + \beta_{14} dD_{i,t+1} + \beta_{15} dV_{i,t+1} + \beta_{16} dL_{i,t} + \beta_{17} dL_{i,t+1} + \varepsilon_{i,t}
\end{aligned}
\tag{1}
$$

Where, X_t is the level of variable X in year t divided by the level of assets in year t; dX_t is the change in the level of X from year $t-1$ to year t, $X_t - X_{t-1}$, divided by assets in year t; dX_{t+1} is the change in the level of X from year t to year t+1, $X_{t+1} - X_t$, divided by assets in year t; V is the market value of the firm as the sum of the market value of equity, the book value of short-term debt, and the book value of long-term debt; E is earnings before extraordinary items plus interest, deferred tax credits, and investment tax credits; NA is net assets defined as total assets minus liquid assets and L corresponds to liquid asset holdings; RD is research and development (R&D) expense I is interest expense; and D is dividends defined as common dividends paid. When R&D is missing, we set it equal to zero.

We expect the change in liquid asset holdings to contribute less to firm value in high government ownership firms and more in high family owned firms, so that β_{16} should be lower in the subsample high government owned firms and higher in high family owned firms. Also, we expect the change in dividends to have a positive impact on firm value in high government ownership, while it would not have the same high positive impact in family concentrated firms.

Descriptive Statistics

The descriptive statistics for the sample are contained in Table 1 including the mean, median, standard deviations of all the different variables used in the study. The variables used in this study are based on annual data for both the Chinese and the Indian firms. Panel A of Table 1 provides the descriptive statistics of Chinese firms. The cash holdings variable, the primary variable in the study, has a mean of 18.7%, a median of 14.2% with a standard deviation of 9.4%. The sample has little skewness. Government ownership is 21.4% while insiders own an average of 2.8% of the outstanding shares. The government ownership variable is highly skewed because some of the Chinese listed companies have high government ownership while others have very little. The board independence variable reflects a mean of 54.7% and a median of 81.4%. The average firm in the sample has sales of approximately $4 billion Renminbi; assets of approximately $4.7 billion Renminbi; a leverage ratio of 21.7%; market to book ratio of approximately 2.64; cash flows to assets of approximately 17%; capital expenditures to assets of about 5.1%; and acquisition to assets of approximately 1.8%. The percentage of revenue devoted to R&D is about 1.7% and the percentage of the working capital from the total assets is approximately 7.1%. The percentage of firms' shares owned by foreign investors has a mean of 11.7%. This variable is skewed since the median value of foreign ownership percentage is 40.5%. In our sample, the firms have a relatively low payout ratio which is 2% on average. The average earnings per share ratio is 2.6%.

Panel B of Table 1 provides the descriptive statistics of Indian firms. The cash holdings variable, the primary variable in the study, has a mean of 13.1%, a median of 16.9% with a standard deviation of 5.8%. Family ownership is 37.8% while board independence is 11.8% insiders own an average of 56.7% of the outstanding shares. The average firm in the sample has sales of approximately $54 billion Rupees; assets of approximately $79 billion Rupees; a leverage ratio of 37.4%; market to book ratio of approximately

4.69; cash flows to assets of approximately 29.5%; capital expenditures to assets of about 6.8%; and acquisition to assets of approximately 3.2%.

Table 1: Descriptive Statistics of Chinese And Indian Firms

	Mean	Median	Standard Deviation
Panel A: Chinese firms			
Cash Holdings	0.187	0.142	0.094
Inside Ownership	0.028	0.351	1.681
Government Ownership	0.214	0.351	2.374
Board Independence	0.547	0.814	0.184
Sales (Millions of RMB)	3,987	1,587	2,584
Assets (Millions of RMB)	4,748	1,684	3,369
Leverage	0.217	0.197	0.157
Market-to-Book	2.64	1.95	1.32
Cash Flow/Assets	0.172	0.157	0.084
Working Capital/Assets	0.071	0.057	0.065
CF Volatility	0.087	0.062	0.041
R&D/Sales	0.017	0.001	0.027
CapEX/Assets	0.051	0.048	0.042
Acquisition/Sales	0.018	0.001	0.013
Payout Ratio	0.019	0.030	0.064
Earnings	0.026	0.036	0.136
Net Assets	3,861	2,917	1,364
Interest Expense	156	67	127.34
Foreign	0.117	0.405	1.361
Panel B: Indian firms			
Cash Holdings	0.131	0.169	0.058
Family Ownership	0.378	0.413	0.147
Insider Ownership	0.567	0.621	0.238
Board Independence	0.118	0.241	0.184
Sales (Millions of Rupees)	58,415	86,647	45,698
Assets (Millions of Rupees)	79,214	104,367	56,368
Leverage	0.374	0.423	0.234
Market-to-Book	4.69	5.23	1.654
Cash Flow/Assets	0.295	0.312	0.094
Working Capital/Assets	0.094	0.125	0.089
CF Volatility	0.098	0.136	0.097
R&D/Sales	0.044	0.057	0.013
CapEX/Assets	0.068	0.074	0.035
Acquisition/Sales	0.032	0.041	0.019
Payout Ratio	0.021	0.029	0.015
Earnings	0.032	0.041	0.022
Net Assets	49,241	52,364	32,157
Interest Expense	139	153	108
Foreign	0.143	0.193	0.087
Diversification factor	3.9	4	2.1

This table provides summary statistics for the sample. The dataset comprises 1164 Chinese firms and 334 Indian firms; the Chinese sample covers the period from 1993 to 2006, while the Indian sample covers the period 2003 to 2006. The descriptive statistics based on annual data, include: ratio of cash to total assets (Cash Holdings), equity ownership of the top five officers (Inside Ownership), government ownership, ratio of independent directors on the board to total directors (Board Independence, non-government representative, non-family representative), family ownership representing the ratio of same family owned shares out of the total, sales, total assets, firm leverage (Leverage), ratio of the market value to book value of assets (Market-to-Book), ratio of cash flow to net assets (CF/Assets), ratio of net working capital to net assets (Working Capital/Assets), standard deviation of cash flows for the past five years (CF Volatility), ratio of research and development to sales (R&D/Sales), ratio of capital expenditures to net assets (CapEx/Assets), and ratio of acquisition to sales (Acquisition/Sales), the percentage of the dividends distributed to the shareholders (Payout ratio), earnings before extraordinary items plus interest, deferred tax credits and investment credits (Earnings), the total assets minus cash (Net assets), the interest expense, and percentage of foreign investors in the company (Foreign). Finally, for the Indian firms the diversification factor represents the number of diversified affiliates related to a firm.

The percentage of revenue devoted to R&D is about 4.4% and the percentage of the working capital from the total assets is approximately 9.4%. The percentage of firms' shares owned by foreign investors has a mean of 14.3%. The average payout ratio is 2.1% while the average earnings per share is 3.2%. The

diversification factor which represents the number of divisions or affiliates within an Indian firm has a median value of 4.

The results of the descriptive statistics give us an idea about the differences between Chinese and Indian firms. Indian firms seem to invest more in their operations, having higher capital expenditure and working capital ratios, higher acquisition ratio and higher R&D ratios. The cash holdings of Indian firms are lower than the Chinese counterpart.

Table 2: Correlations – Chinese and Indian Firms

	Cash Holdings	Inside Ownership	Government Ownership	Board Independence
Panel A: Chinese firms				
Inside Ownership	-0.141**			
Government Ownership	0.214***	-0.028*		
Board Independence	-0.057**	0.374**	-0.518***	
Net Assets (Millions of RMB)	-0.236*	0.196**	-0.174*	0.241**
Panel B: Indian firms				
	Cash Holdings	Inside Ownership	Family Ownership	Board Independence
Inside Ownership	-0.23**			
Family Ownership	-0.35***	0.325**		
Board Independence	0.057	0.044	-0.114*	
Assets (Millions of RMB)	-0.158*	0.311**	0.381*	0.384

*this table provides data on the correlations between cash holdings, governance variables, and firm size. the data set comprises1164 firms covering the period from 1993 to 2006 and 334 indian firms covering the period 2003 to 2006. *, ** and *** are significant at 10%, 5% and 1% respectively.*

Panel A in table 2 contains the correlation coefficients between cash holdings, governance proxies, and firm size. Cash holding is positively related to government ownership and the companies' assets. Cash holding is negatively related to insider ownership and board independence. Insider ownership is negatively related to government ownership while it is positively related to board independence and firm size. Overall, a more independent board, with higher insider ownership tends to have lower cash holdings. High government ownership firms tend to have low independence and high cash holdings. This may be an indicator that the government is using its large ownership concentration to extract private benefits from the firms.

Panel B in table 2 contains the correlation coefficients between cash holdings, family ownership variable, and firm size. For Indian firms, cash holding is negatively related to family ownership and insider ownership. Insider ownership is positively related to family ownership and firm size. Overall, Indian firms with more family concentrated ownership tend to have less cash holdings. This may also be an indicator that family concentration in firms reduces the agency relationship conflicts and creates more alignment between the shareholders, which in turn reduces the extraction of private benefits of control by a large concentrated group.

MULTIVARIATE REGRESSION ANALYSIS

Our study examines the relation between cash holdings and various controls for firm specific variables in a multivariate setting using cross-sectional regressions. The dependent variable is cash holdings, i.e. the log of cash to total assets ratio. The independent variables are governance-related variables and firm specific factors affecting cash holdings. The regression coefficients of the different variables address the predictions of our hypotheses relating governance to cash ratios.

Models 1 through 3 of panel A of Table 3 provide the analysis of the relation between corporate cash holdings and governance/company specific variables for Chinese firms. The results in Models 1 and 3 suggest that the government ownership is positively and significantly related to cash holdings. Higher government ownership leads to larger corporate cash holdings. Also, there is a negative relationship

between the board independence variable and the cash holdings which is consistent with our hypotheses. The results in Model 2 suggest that the cash flow volatility affects negatively the cash holdings of Chinese firms. We do not find any significant relationship between the firm's ROE level and its cash holdings, thus suggesting that the Chinese minimum rate of return regulatory requirement is not an important factor in determining Chinese firm cash levels.

Table 3: Regression Analysis – Cash Holdings

	Cash Holdings	Cash Holdings	Cash Holdings
Panel A: Chinese Firms			
Intercept	0.069	0.051	0.084
Inside Ownership	0.014*		0.011*
Government Ownership	0.041***		0.032***
Board Independence	-0.015*		-0.021
Log Sales (Millions of RMB)		0.185	0.019
Log Net Assets (Millions of RMB)	0.171***	0.0168**	0.0145**
Leverage		-0.145*	-0.095*
Market-to-Book		0.251	0.341
Cash Flow/Assets		0.051**	0.044*
Working Capital/Assets		-0.041*	-0.032*
CF Volatility		-0.019**	-0.022**
R&D/Sales		0.0174	0.084
CapEX/Assets		-0.0185*	-0.036*
Acquisition/Sales		-0.0391	-0.0486
ROE		-0.015	-0.024
Payout Ratio		-0.271**	-0.317**
Panel B: Indian Firms			
Intercept	0.017	0.037	0.045
Inside Ownership	-0.031*		-0.024*
Family Ownership	-0.158***		-0.087**
Board Independence	-0.008*		-0.421
Log Sales (Millions of Rupees)		0.413	0.584
Log Net Assets (Millions of Rupees)	-0.259	0.0168	0.0398
Leverage		-0.084*	-0.054*
Market-to-Book		0.618	0.287
Cash Flow/Assets		0.107*	0.039*
Working Capital/Assets		-0.074*	-0.061*
CF Volatility		-0.125	-0.291
R&D/Sales		0.517	0.244
CapEX/Assets		-0.052*	-0.043*
Acquisition/Sales		-0.014	-0.0587
Diversification factor		-0.071**	-0.085**
Payout Ratio		-0.474	-0.325

this table provides regression results of the determinants of cash holdings; three different specifications are used, the first using only governance variables as the independent variables, the second using accounting variables, and the third using both governance and accounting variables. *, ** and *** are significant at 10%, 5% and 1% respectively.

Models 1 through 3 of panel B of Table 3 provide the analysis of the relationship between corporate cash holdings and governance/company specific variables for Indian firms. The results in Models 1 and 3 suggest that family ownership is negatively and significantly related to cash holdings. Higher family ownership leads to lower corporate cash holdings. Also, there is a negative relationship between the board independence variable and the cash holdings which is consistent with our hypotheses. Family ownership and board independence provide monitoring on the management thus, reducing the agency relationship conflicts and having a positive impact on firm performance. The results in Model 2 suggest that the firms with higher investment opportunities and lower cash flow volatility tend to have lower cash holdings. Also, we find that highly diversified Indian firms tend to have lower cash holdings.

Overall, the results indicate that for Chinese firms, large government concentrated ownership results in larger cash holdings held by the firm. In Indian firms, large family ownership concentration results in lower cash holdings held by the firm. Indian firms seem to show better use of cash in profitable projects.

Thus family and insider ownership has more positive impact on the firm when compared to the impact of government ownership of Chinese firms.

Table 4: Regression Analysis – Firm Value

	Firm Value	Firm Value	Firm Value
Panel A: Chinese Firms			
Intercept	0.374	0.514	0.611
Inside Ownership	-0.250**		-0.315**
Government Ownership	-0.687***		-0.487***
Board Independence	0.269**		0.614**
Sales (Millions of RMB)		0.748	
Net Assets (Millions of RMB)	0.374**	0.359**	
Leverage		-0.276*	
Market-to-Book		0.354**	0.571***
Cash Flow/Assets		0.036**	
Working Capital/Assets		0.011*	
CF Volatility		-0.344**	
R&D/Sales		0.251	
CapEX/Assets		0.289	
Acquisition/Sales		0.151	
ROE		0.514	0.817
Payout Ratio		0.415***	0.698***
Panel B: Indian Firms			
Intercept	0.217	0.722	1.374
Family Ownership	1.589***		1.544***
Insider Ownership	0.969***		0.617***
Board Independence	0.239		0.399
Log Sales (Millions of Rupees)		0.369	
Log Net Assets (Millions of Rupees)	0.714*	0.689*	
Leverage		-0.117*	
Market-to-Book		0.417**	0.327**
Cash Flow/Assets		0.628***	
Working Capital/Assets		0.371**	
CF Volatility		-0.074*	
R&D/Sales		0.317*	
CapEX/Assets		0.117*	
Acquisition/Sales		0.475*	
Diversification factor		1.379***	1.527***
Payout Ratio		0.117	-0.271*

*This table provides regression results of the determinants of the firm value using three different specification; the first using only governance variables as the independent variables, the second using accounting variables, and the third using both governance and company specific variables. The firm value is defined as the market value of equity plus the book value of debt. Panel A shows the results of Chinese firms, while panel B provides the results of Indian firms. *, ** and *** are significant at 10%, 5% and 1% respectively.*

In Table 4, we examine the impact of corporate governance variables and firm specific variables on the firm value using multivariate cross-sectional regressions. In all three models, the value of the firm is defined as the sum of the market value of equity, the book value of short-term debt, and the book value of long-term debt. Panel A provides the results for Chinese firms, while panel B provides the results for Indian firms. For Chinese firms, the results show that government ownership has a negative effect on firm value. The payout ratio has a positive effect on firm value. Both results are consistent with our hypotheses. Also, we find a significant positive relationship between the board independence variable and firm value which is also consistent with our hypotheses. The Model 2 results suggest that firms with higher future investment opportunities and lower cash flow volatility tend to have higher values. Finally, we do not find any significant relationship between the firm's ROE level and the firm value. This suggests that regulatory impact is not as important as firm specific variables in determining Chinese firm value.

For Indian firms, the results show that family ownership concentration has a significantly positive impact on the firm value. Also, insider ownership has a positive effect on firm value. Both models 1 and 3

provide similar result. The Model 2 results suggest that firms with higher future investment opportunities and lower cash flow volatility tend to have higher values. Finally, we find that firms with higher diversification factors are valued higher than those with lower diversification factors. These results are consistent with the argument that family firms have better corporate governance. Therefore they use their cash in a value enhancing manner in positive NPV projects which increases the firm value. Diversification also seems to be a positive value enhancing option for family concentrated firms.

MARKET VALUE OF CASH HOLDINGS

To further test our hypotheses and provide more robust results, we estimate the regression model given by equation (1). We deflate all variables by total assets to control for heteroskedasticity. We follow Fama and French (1998) and estimate equation (1) using Fama–MacBeth (1973) regressions.

Table 5: Impact of Ownership Concentration of Firm Value for Chinese Firms

	High Government	Low Government	p-value of Difference	Low Foreign	High Foreign	p-value of Difference
Intercept	0.81 (0.041)	0.84 (0.043)	0.3841	0.62 (0.015)	0.79 (0.051)	0.0000
E_t	2.36 (0.517)	1.96 (0.329)	0.3751	3.15 (0.436)	4.02 (0.218)	0.1574
dE_t	-0.69 (0.421)	-0.32 (0.205)	0.1241	-0.78 (0.308)	-0.41 (0.119)	0.0068
dE_{t+1}	1.21 (0.621)	1.84 (0.241)	0.2869	0.38 (0.284)	1.32 (0.145)	0.0001
dNA_t	0.34 (0.024)	0.68 (0.084)	0.0041	0.38 (0.251)	1.16 (0.173)	0.0011
dNA_{t+1}	0.23 (0.051)	0.31 (0.071)	0.4185	0.05 (0.076)	0.18 (0.048)	0.2958
RD_t	-4.05 (1.573)	5.21 (0.841)	0.0000	0.61 (0.712)	4.89 (0.887)	0.0000
dRD_t	7.23 (3.982)	3.82 (2.373)	0.1574	4.25 (1.527)	4.64 (1.387)	0.8194
dRD_{t+1}	5.31 (3.721)	7.56 (2.043)	0.6521	4.52 (1.814)	9.11 (1.402)	0.0314
I_t	-3.81 (0.854)	-2.63 (1.025)	0.0000	-0.68 (0.517)	-3.07 (0.923)	0.0004
dI_t	1.39 (0.597)	-0.82 (0.769)	0.0023	0.51 (0.891)	-0.44 (0.499)	0.1841
dI_{t+1}	-1.36 (0.782)	-2.86 (0.567)	0.0115	-0.91 (0.668)	-2.17 (0.428)	0.0602
D_t	7.95 (2.341)	3.44 (1.694)	0.0011	10.23 (2.188)	5.12 (1.856)	0.0017
dD_t	-1.07 (0.674)	0.87 (0.536)	0.0574	-2.57 (1.547)	0.65 (0.436)	0.0024
dD_{t+1}	2.67 (0.841)	1.76 (0.718)	0.9517	4.52 (1.748)	-0.85 (1.188)	0.0118
dV_{t+1}	-0.23 (0.087)	0.12 (0.013)	0.1423	0.04 (0.185)	0.03 (0.041)	0.9053
dL_t	0.18 (0.175)	0.86 (0.176)	0.0004	0.21 (0.206)	0.91 (0.185)	0.0015
dL_{t+1}	0.28 (0.117)	0.71 (0.204)	0.0000	0.31 (0.157)	0.47 (0.138)	0.3984

This table presents the results of the value regressions, the regressions are run independently for each subsample. The firm value is defined as the market value of equity plus the book value of debt. The firm value is found for two samples: government ownership concentration and foreign ownership percentage – government ownership sample being divided by the median value of 35%; above 35% is high government ownership, below 35% is low government ownership; foreign ownership being divided by the median value of 40%; above 40% is high foreign ownership while below 40% is low foreign ownership.

In Tables 5 and 6, we present the estimates of the regressions for China and India. In table 5, we use two subsamples with the first divided by the government ownership concentration. The 35% median value of government ownership is the dividing point of the two samples due to the large degree of skewness present in the data. The second subsample is divided by the level of foreign investors in Chinese firms.

The median value of 40% is employed as the dividing point. In Table 6, we use also two subsamples with the first divided by the family ownership concentration. The 40% median value of family ownership is the dividing point of the two samples. The second subsample is divided by the degree of diversification in the Indian firms in our sample. The median value of 4 is employed as the dividing point.

We find that cash contributes significantly more to the firm value in firms with lower government ownership and higher foreign investor concentration. Our regression allows us to isolate the impact of a change in cash holdings while keeping all other variables in the regression unchanged. Consequently, we can evaluate the impact of an increase in cash that brings about an increase in total assets by the same amount as opposed to an exchange of fixed assets for cash. In high government concentration firms, a one RMB increase in cash holdings results in an increase in firm value of 0.18 RMB. In low government concentration firms, a one RMB increase in cash holdings results in an increase of 0.86 RMB. We find that a one RMB increase in non-cash assets is associated with an increase of 0.34 RMB in firm value in high government ownership firms while the same increase in the non-cash assets results in an increase of 0.68 RMB in firm value for low government ownership firms. The regression is consistent with a greater discount for cash than for fixed assets for firms with high levels of government concentration. A 1 RMB of cash contributes 0.68 RMB less to firm value for high government ownership firms while a 1 RMB of fixed assets contributes 0.34 RMB less. The regression provides no evidence that earnings are valued more in low government ownership firms.

The second regression reported in Table 6 divides the subsamples by utilizing the percentage of foreign investors out of the total number of investors. The results show that firms with relatively more foreign investors show a stronger relationship between changes in cash and firm value. We find that an additional 1 RMB of cash accumulated over the most recent year results in a 0.21 RMB change in firm value for firms with low foreign investor concentration. The same 1 RMB change in cash accumulated over the most recent year results in a change of 0.91 RMB in firms with high foreign investor concentration. Thus we conclude that increases in other assets are discounted less in countries with poor investor protection than are increases in cash. However, in contrast to the regression that uses the government ownership, firms with higher foreign ownership are valued more regardless of firm characteristics. In sum, the two regressions displayed in Table 6 strongly support hypotheses 1 and 2. Further, both regressions in Table 6 support hypothesis 3. If cash is valued less in high government ownership firms, we would expect payouts to be worth more. For firms with high government ownership concentration, dividend payout is valued 4.51 RMB more than in firms with low government concentration. The difference between the two coefficients is significant at better than the 1% level. Also, in firms with low foreign ownership the dividend payout is valued at 5.11 RMB more than in firms with high foreign ownership. Our results show that high government ownership or low foreign ownership in Chinese firms is not a desirable factor for investors. In those type of firms, investors value dividends higher while valuing cash less.

We follow the same analysis for Indian firms by dividing the sample of Indian firms by family concentration and diversification factor. We find that cash contributes significantly more to the firm value in firms with high family concentration and higher diversification factor in Indian firms. In high family concentration firms, a one Rupee increase in cash holdings results in an increase in firm value of 0.76 Rupees. In low family concentration firms, a one Rupee increase in cash holdings results in an increase of 0.34 Rupees. A 1 RMB of cash contributes 0.42 Rupees less to firm value for low family concentrated firms than for high family concentrated firms. We also find that earnings are valued higher in firms with high family concentration than in firms with low family concentration; the difference being 0.38 Rupees. Finally, dividend payout is valued less in firms with high family concentration than in low family concentration; the difference being 2.49 Rupees. Also, we find that R&D expense is value more in firms with high family concentration than in firms with low family concentration, the difference being 0.40 Rupees more.

Table 6: Impact of Ownership Concentration of Firm Value for Indian Firms

	High Family Ownership	Low Family Ownership	p-value of Difference	High Diversification	Low Diversification	p-value of Difference
Intercept	0.77 (0.052)	0.83 (0.038)	0.2945	0.51 (0.027)	0.66 (0.037)	0.0000
E_t	0.85 (0.017)	0.47 (0.051)	0.0017	0.76 (0.023)	0.51 (0.027)	0.0004
dE_t	-0.74 (0.847)	-0.41 (0.189)	0.5391	-0.58 (0.215)	-0.67 (0.223)	0.0374
dE_{t+1}	0.97 (0.568)	1.17 (0.394)	0.3581	0.34 (0.511)	0.97 (0.347)	0.0271
dNA_t	1.07 (0.387)	0.77 (0.157)	0.1547	0.42 (0.510)	1.37 (0.397)	0.0741
dNA_{t+1}	0.51 (0.281)	0.42 (0.119)	0.4428	0.33 (0.274)	0.41 (0.557)	0.3277
RD_t	0.81 (1.458)	0.41 (1.563)	0.0005	0.77 (1.334)	0.53 (1.217)	0.0003
dRD_t	3.15 (0.584)	3.82 (2.373)	0.1574	1.33 (1.124)	1.41 (1.238)	0.5611
dRD_{t+1}	3.47 (1.847)	7.56 (2.043)	0.6521	1.84 (1.855)	1.47 (1.774)	0.4412
I_t	-2.14 (0.368)	-2.63 (1.025)	0.0000	-1.54 (1.253)	-2.12 (2.778)	0.0011
dI_t	1.36 (0.854)	-0.82 (0.769)	0.0023	-0.27 (0.364)	-1.12 (0.358)	0.1223
dI_{t+1}	-2.02 (0.591)	-2.86 (0.567)	0.0115	-0.88 (0.741)	-1.98 (0.214)	0.0847
D_t	1.36 (0.487)	3.85 (0.173)	0.0018	1.32 (0.841)	3.99 (0.128)	0.0008
dD_t	-1.35 (0.485)	-1.96 (0.674)	0.2745	2.41 (1.852)	5.27 (1.658)	0.0374
dD_{t+1}	1.86 (1.087)	1.97 (0.258)	0.8647	3.21 (0.914)	8.36 (2.695)	0.5678
dV_{t+1}	-0.44 (0.137)	-0.52 (0.287)	0.4571	0.36 (1.847)	0.52 (0.337)	0.7590
dL_t	0.76 (0.128)	0.34 (0.237)	0.0021	0.86 (1.025)	0.41 (0.563)	0.0009
dL_{t+1}	0.38 (1.294)	0.47 (1.847)	0.2715	1.21 (0.338)	1.33 (0.441)	0.3274

This table presents the results of the value regressions, the regressions are run independently for each subsample. The firm value is defined as the market value of equity plus the book value of debt. The firm value is found for two samples: The firm value is found for two samples: family ownership concentration and diversification factor – family ownership sample being divided by the median value of 40%; above 40% is high family ownership, below 40% is low family ownership; diversification factor being divided by the median value of 4; above 4 is highly diversified firm while below 4% is low diversified firm.

The second regression reported in Table 6 divides the subsamples by the degree of diversification factor. The results show that diversified firms show a stronger relationship between changes in cash and firm value. We find that an additional 1 Rupee of cash accumulated over the most recent year results in a 0.86 Rupees change in firm value for more diversified firms. The same 1 Rupee change in cash accumulated over the most recent year results in a change of 0.41 Rupees in firms with low diversification factor. In sum, the two regressions displayed in Table 6 strongly support our hypotheses regarding family ownership benefits on firm value. Also, we find that the dividend payout is valued higher in firms with low diversification factor than in firms with high diversification factor, the difference being 2.67 Rupees. Finally, R&D expense is value higher in firms with high diversification factor than in firms with low diversification factor, the difference being 0.24 Rupees.

CONCLUSIONS

In this paper, we examine factors affecting Chinese and Indian firm cash holdings. We also study the effect of concentrated ownership on private benefit extraction in firms it controls and the effect such

extraction has on firm valuation in the Chinese and Indian settings. We test whether lower agency costs in family firms lead to higher cash valuation and higher agency costs in high government owned firms lead to lower cash valuation. Previous studies suggest that family firms have better financial performance and lower agency costs (Anderson and Reeb, 2003; Villalonga and Amit, 2006). While high government owned firms have lower performance and higher agency costs (Hassan, D'Souza, Wei and Varela, 2003; Wei, Xie and Zhang, 2005).

We test three main hypotheses. First, minority shareholders value cash holdings less in high government ownership firms while they value it more in high family firms. Second, high government ownership negatively affects firm value while high family ownership firms affect positively firm value. Third, minority shareholders value dividends more in high government ownership firms while they value it less in high family owned firms. In order to test for robustness, we also employed the foreign investor concentration variable and diversification factor in testing hypothesis 3. Our results strongly support all three hypotheses. We find that high government ownership negatively affects firm value. Investors discount the value of cash holdings in high government ownership firms and prefer instead to receive larger dividend payouts from those firms. Conversely, investors assign higher value to cash holdings in firms with high family ownership and they do not assign high value for dividends paid by firms with high family ownership compared to low family ownership.

Our paper sheds light on one of the most important topics in corporate finance, the impact of large concentrated ownership on the firm's performance and valuation. We find that in the Chinese case, the government concentration has negative impact on firm value while in the Indian case, the family concentration have positive impact on firm value.

The study is based mainly on data provided by two different sources, namely the Chinese CSMAR database and the Indian PROWESS database. Each data provider has a different format presenting the data, thus we tried our best to use variables that closely match when comparing the Chinese and Indian firms. As a result, some subjectivity was involved when we selected the particular data used for this study. We believe that we were consistent in our work and accurate, in which the results are robust in all material respects. To check the robustness of our results, we used several different specifications in the regression analysis. An extension of our study can be done using a more complete data set covering a wider time period to verify if our findings would stay the same over longer period of time. In doing so, our conclusions can be stronger and the results more robust.

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