

MULTIPLE LARGE SHAREHOLDERS AND THE VALUE OF CASH HOLDINGS

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Abstract

Motivated by recent research stressing their unique governance characteristics, we investigate the impact of multiple large shareholders on the relation between cash holdings and firm value for a sample of 2,723 firms from 22 countries. We find that the presence of multiple large shareholders enhances the value of firm's cash. We show that the value of cash is positively associated with an even distribution of blockholders' voting rights and with higher control contestability of the largest shareholder. We also bring new evidence that the value of cash holdings is not monotonic across firms in economies with a good institutional environment, by showing that the presence of multiple large shareholders significantly increases the value of firm's cash. Overall, our results contribute to the literature on corporate governance by showing that multiple large shareholders improve internal monitoring and moderate the agency costs of a firm's liquid assets.

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1. INTRODUCTION

Research on the economics of a firm's cash holdings dates from the earliest study of Keynes (1936), who advocates saving on transaction costs and hedging against the risk of future cash shortfalls as motives for a firm to hold assets in cash.¹ Corroborating these theoretical predictions, Kim et al. (1998) and Opler et al. (1999) find that cash-rich firms have higher external financing costs, stronger growth opportunities, riskier cash flows, and more volatile earnings. On the other hand, cash reserves, especially those held in excess of a firm's 'normal' needs, can be detrimental to minority shareholders. In particular, in the presence of insider discretion and other forms of agency problems, excess cash might be inefficiently used to extract private benefits (e.g., Jensen, 1986). Supporting this view, Blanchard et al. (1994) and Harford (1999), among others, provide evidence that cash-rich firms are more likely to invest in value-decreasing projects (e.g., unrelated acquisitions).²

More recently, Pinkowitz et al. (2006), Dittmar and Mahrt-Smith (2007), Kalcheva and Lins (2007), and Harford et al. (2008) provide compelling evidence that corporate governance is relevant in shaping the valuation effects of cash holdings. Pinkowitz et al. (2006) show that country-level corporate governance traits influence the direction of the cash valuation effect. They find that investors in countries with weak shareholder protection laws place a lower value on a dollar of corporate cash holdings relative to investors in countries with strong protection rules. Dittmar and Mahrt-Smith (2007) and Harford et al. (2008) use firm-level governance data to show that the market value of cash for firms with good governance is higher than the value of cash in firms with poor governance. Kalcheva and Lins (2007) use both country- and firm-level governance data to document that the positive relation between cash holdings and effective managerial control is more pronounced when external shareholder protection is lower. In a related study, Masulis et al. (2009) examine how the separation between control and cash flow rights influences the utilization of cash reserves and its impact on firm value, and show that as excess control—a proxy for firm's agency costs—widens, corporate cash holdings are worth less to minority shareholders. We extend this line of research by examining the impact of

¹ Keynes (1936) explains that a firm can save on the transaction costs of converting cash substitutes into cash (i.e., *transactions-motive*) and can use its cash reserves to offset future cash shortfalls (i.e., *precautionary-motive*).

² Other studies (e.g., Mikkelson and Partch, 2003; Bates et al., 2009; among others) dispute these findings by documenting the non-discretionary effects of cash holdings.

complex ownership structure on the value of firm's excess cash holdings, focusing on the effect of the presence and characteristics of multiple large shareholders (MLS, henceforth) beyond the controlling owner.

We contribute to the literature on cash holdings and corporate governance on several grounds. First, we specifically focus our attention on exploring the relatively understudied topic of MLS governance because theoretical (e.g., Winton, 1993; Zwiebel, 1995; Kahn and Winton, 1998; Bennedsen and Wolfenzon, 2000; Bloch and Hege, 2001) as well as recent empirical (e.g., Maury and Pajuste, 2005; Laeven and Levine, 2008; Attig et al., 2008, 2009) studies support the non-trivial monitoring role of blockholders beyond the largest controlling shareholder. Our study responds to Laeven and Levine's (2008, p.602) call for further empirical research on *"the special corporate governance features of publicly traded firms with multiple large owners"*. Second, by studying the impact of MLS in shaping the valuation effects of cash holdings, we provide evidence on one of the channels through which corporate governance may affect corporate value. For instance, Dittmar and Mahrt-Smith (2007, p.627) argue that *"A large and growing literature documents that governance improves firm value, however, much less is understood about how governance enhances firm value."*

To our knowledge, this paper is the first to test whether MLS alter the valuation effects of cash holdings. We are specifically interested in a firm's cash holdings because liquid assets can be converted into private benefits at a lower cost than other assets (Myers and Rajan, 1998) and are likely to be used in a discretionary fashion, particularly in poorly governed firms (e.g., Dittmar and Mahrt-Smith, 2007; Kalcheva and Lins, 2007; Masulis et al., 2009; among others). Last but not least, we investigate the impact of a country's institutional environment (e.g., investor protection) in shaping the governance role of MLS, as evidenced by cash valuation.

Four key insights emerge from our analysis. First, we find that investors value higher cash holdings in firms with MLS, whose presence brings valuable internal monitoring according to recent research. Second, we show that a higher dispersion of control is negatively related to the value of excess cash for the subsample of firms with at least two large shareholders. We find that an increase in the contestability of the largest shareholder's power—as a result of the higher relative voting power of the second and third largest shareholders or the pivotal voting power of the minority interests—enhances the value of firm's excess cash holdings. In line with Laeven

and Levine (2008) and Attig et al. (2008), this result indicates that a firm with uneven distribution of voting rights among the controlling shareholders is likely to have more serious agency problems that may lead to cash diversion. Third, we find that the presence and voting size of MLS have a higher impact on the valuation of cash in family-controlled firms than in non-family firms, implying that MLS perform a more valuable role as internal monitors in family firms. Finally, we show that internal monitoring by MLS enhances the value of firm's excess cash holdings in more protective jurisdictions. This evidence is particularly interesting as it suggests that the valuation effect of cash holdings is not monotonic across firms in countries with a good institutional environment; rather, it depends on the firm's internal governance mechanisms.

Overall, our study provides compelling evidence that the presence of MLS improves internal monitoring and alleviates potential agency costs of a firm's liquid assets. More generally, our findings map into Laeven and Levine's (2008) evidence by suggesting that excess cash holdings are an important channel through which investors acknowledge the role of MLS in curbing agency problems. Although our main inferences are robust to a battery of tests, they should be interpreted cautiously, like other studies addressing the role of MLS (e.g., Laeven and Levine, 2008; Attig et al., 2008), as the outcome may be influenced by omitted variables.³

The rest of the paper is organized as follows. Section 2 reviews prior research. Section 3 outlines the data and reports descriptive statistics. Section 4 covers the empirical evidence and Section 5 concludes.

2. DISCUSSION OF RELATED STUDIES

The governance of Multiple Large Shareholders: The handful of theoretical studies that have addressed MLS governance does not provide a coherent picture of their monitoring role. Bennedsen and Wolfenzon (2000) distinguish two effects of MLS governance: *the alignment effect* and *the coalition formation effect*. They suggest that, from the *alignment perspective*, MLS can be associated with valuable monitoring, in particular when their shareholdings are evenly distributed or when their stakes in the firm are higher. Similarly, Bloch and Hege (2001) argue that competition for corporate control commits the (two) large shareholders to refrain from

³ In our empirical analysis, we attempt to minimize the impact of the bias of omitted variables by using industry- and country-fixed effects.

extracting private benefits. On the other hand, from *the coalition formation perspective*, Bennedsen and Wolfenzon (2000) note that once votes and cash flows are distributed, the coalition with the smallest cash flow stake wins the control contest since it has the largest expropriation potential. Conditional on having adequate voting power to control the firm, such a coalition will negatively impact firm value as it increases the diversion of divisible private benefits. Similarly, Zwiebel (1995) discusses a paradigm in which ownership structure is determined by investors who allocate their wealth across firms to receive a larger share of private benefits. Zwiebel's (1995) model implies that moderate-sized blockholders are prone to be in cahoots with each other to achieve greater expropriation. Gomes and Novaes (2005) develop a theoretical decision model suggesting that concentrated control in the hands of one large investor provides better protection to minority shareholders than shared control among blockholders. Kahn and Winton (1998) identify instances where large shareholders prefer to opportunistically trade on private information instead of monitoring management.

Empirical studies also do not derive unequivocal evidence of the impact of MLS on firm value. For instance, Lehman and Weigand (2000) report that the presence of a strong second largest shareholder increases profitability for a sample of German firms. In contrast, Maury and Pajuste (2005) do not find a significant valuation effect of the presence of MLS for a sample of Finnish firms. Attig et al. (2009) provide evidence that the existence of multiple blockholders is associated with a positive and significant effect on corporate value of East Asian firms. Attig et al. (2008) also document that firm's information quality, evident in lower equity financing costs, improves with the presence of MLS. However, most empirical studies, in line with the theoretical predictions, indicate the relevance of the distribution among controlling shareholders in shaping the efficiency of their monitoring role. For instance, Maury and Pajuste (2005), Laeven and Levine (2008), and Attig et al. (2008, 2009) support the argument that the presence of MLS with comparable voting power or cash flow rights is associated with a valuable governance role. In addition, Faccio et al. (2001) and Attig et al. (2008) show that the governance role of MLS depends on the firm's institutional environment.

The Value of Cash: The question of firm's cash value has long been disputed, and conclusive empirical evidence has generally been lacking. Much of the debate has been polarized between two main views. The first view, based on the tradeoff model of cash holdings, suggests that firms hold cash for precautionary reasons, to avoid the cost of being

short of liquidity. Evidence of this incentive is provided by Kim et al. (1998) and Opler et al. (1999), among others. The second view asserts that (excess) cash, in the presence of insider discretion and other forms of agency costs, can be detrimental to minority shareholders because it can be easily converted into private benefits. Blanchard et al. (1994) and Harford (1999), among others, show that cash-rich firms are more likely to invest in value-decreasing projects. However, Mikkelsen and Partch (2003) challenge this argument by showing that persistent cash holdings do not lead to poor performance. To further discriminate between the two competing views, a more recent line of empirical research controls for the impact of firm's institutional environment and agency costs, and concludes that cash holdings are most valuable in more protective environments and better governed firms. For instance, Pinkowitz et al. (2006) show that investors in countries with poorer investor protection discount the value of cash holdings. Masulis et al. (2009) show that a wedge between ownership and control decreases the marginal value of cash.

We draw on these two strands of research to examine the impact of MLS on the valuation effect of firm's excess cash holdings. We investigate whether MLS improve internal monitoring and reduce the risk of appropriating private benefits by the controlling owner through the diversion of firm's cash reserves, which will translate into higher firm valuation. In so doing, we contribute to burgeoning empirical research on the role of MLS as an internal governance mechanism and on cash holdings as a channel through which corporate value is affected.

3. DATA AND VARIABLES

This section describes our sample selection, the construction of our key test variables, the choice of controls for the regression analysis, and provides descriptive statistics.

3.1 Sample

To investigate the impact of MLS on the valuation of cash holdings, we draw on two comparable sources of ultimate ownership data at the firm-level: Claessens et al.'s (2000) dataset covering 9 East Asian economies (Hong Kong, Indonesia, Japan, Korea, Malaysia, Philippines, Singapore, Taiwan, and Thailand), and Faccio and Lang's (2002) dataset for 13 Western European countries (Austria, Belgium, Finland, France, Germany, Ireland, Italy, Norway,

Portugal, Spain, Sweden, Switzerland, and the U.K.). These sources provide information on the presence, identity and voting stakes of major ultimate shareholders. We exclude firms that do not have a controlling shareholder who owns more than 10% of the voting rights. We hand-match the ultimate ownership data to *Worldscope* to obtain financial information for our sample. Following prior studies, we exclude financial firms (SIC codes between 60 and 69) since they hold cash for different reasons than other firms. We also eliminate firms with insufficient financial data to measure firm valuation, cash holdings and other control variables. After applying these screens, we have a sample of 2,723 firms from 22 countries for the year 1999.

3.2 Variables

Firm Valuation

Following prior research (e.g., Kalcheva and Lins, 2007), we measure firm value with the market-to-book ratio of assets (*MTBA*), where the market value of assets is the market value of equity plus the book value of assets minus the book value of equity.

Excess Cash Holdings

Literature on the determinants of cash holdings suggests that firms tend to hoard optimal levels of cash for precautionary reasons (Kim et al., 1998; Opler et al., 1999). For instance, in the presence of market imperfections, firms can save on transaction costs and hedge against future cash shortfalls by stockpiling cash reserves. In turn, this allows firms to inexpensively conduct day-to-day operations and pursue profitable growth opportunities. Dittmar and Mahrt-Smith (2007) argue that, from a corporate governance perspective, cash held beyond the optimal level is important because it is subject to insiders' discretion. Consequently, we estimate the optimal level of cash using a variation of Opler et al.'s (1999) reduced form model⁴ (subscripts suppressed for notational convenience):

⁴ Similar estimations of excess cash using variations of Opler et al.'s (1999) model are used by Bates et al. (2009); D'Mello et al. (2008); and Faleye (2004); among others.

$$\begin{aligned} \text{Ln}(\text{CASH}) = & \alpha + \beta_1\text{ASG} + \beta_2\text{SIZE_NA} + \beta_3\text{CF_NA} + \beta_4\text{NWC_NA} + \beta_5\text{CAPEX_NA} + \beta_6\text{LEV_NA} \\ & + \beta_7\text{INDSIG} + \beta_8\text{RD} + \beta_9\text{DIVDUM} + \beta_{10}\text{REGDUM} + \varepsilon \end{aligned} \quad (1)$$

where *CASH* is cash and cash equivalents to assets; *ASG* is average sales growth over the previous three years; *SIZE_NA* is the natural logarithm of net assets in U.S. dollars; *CF_NA* is cash flow to net assets; *NWC_NA* is net working capital (current assets minus current liabilities minus cash and cash equivalents) to net assets; *CAPEX_NA* is capital expenditures to net assets; *LEV_NA* is long-term debt to net assets; *INDSIG* is industry-level volatility of cash flow measured over the previous five years; *RD* is research and development spending to sales;⁵ *DIVDUM* is a dummy variable set to one if the firm paid dividends during the year, and zero otherwise; *REGDUM* is a binary variable set to one if the firm belongs to a regulated industry, and zero otherwise; and ε is the error term. Net assets represent assets net of cash and cash equivalents. We estimate the above regression for each country and retain the firm-level exponentiated residual (*XCASH*) as our measure of excess cash holdings.

Multiple Large Shareholder Variables

We extend prior research by examining whether the presence of large blockholders affects the value of cash in closely-held firms by restricting diversionary activities of the controlling owner. We consider five variables reflecting various MLS characteristics. We begin by categorizing firms that have more than one significant shareholder. We construct an indicator variable (*MLSD*) set to one if at least one large shareholder, beyond the largest, controls more than 10% of the voting rights, and zero otherwise. To the extent that MLS are associated with better monitoring, we expect excess cash holdings to be associated with higher value in firms with MLS other than the ultimate owner (*MLSD* = 1).

Next, we refine our analysis to explore the bargaining power of MLS. Bennedson and Wolfenzon (2000) and Bloch and Hege (2001), among others, argue that MLS can engage in efficient monitoring because of the size of their shareholdings, which will increase the contestability of the largest shareholder's control. Alternatively, large voting stakes of MLS enable them to share divisible private benefits of control. Zwiebel's (1995) argument, that blockholders are prone to be in cahoots with each other to engage in corporate diversion, lends support to this entrenchment view of MLS. We rely on different proxies to capture the

⁵ Where research and development spending is missing, we set it to zero.

bargaining power of MLS. We start by measuring the power of the second largest shareholder relative to the first largest shareholder ($VOTE21$) using the ratio of their respective voting stakes ($VOTE2/VOTE1$). Then we investigate the relative weight of a coalition formed by the second and third largest shareholders vis-à-vis the largest shareholder ($VOTE231$) using the ratio of voting rights of the coalition to the voting rights of the largest shareholder ($(VOTE2+VOTE3)/VOTE1$). We also consider the dispersion of the voting stakes among the three largest shareholders ($HERFDVOTE$), which we capture with the Herfindahl index of the differences in the voting stakes of two successive large shareholders ($(VOTE1-VOTE2)^2+(VOTE2-VOTE3)^2$). Although the direction effect of the MLS bargaining power is ambiguous, for expositional purposes we confine our argument to the efficient-monitoring view. Accordingly, we expect excess cash holdings to contribute more to firm valuation when variables reflecting the power of other large shareholders ($VOTE21$, $VOTE231$) are high and the dispersion of their voting rights ($HERFDVOTE$) is low.

Finally, we build on the framework of Milnor and Shapley (1978) to estimate the probability (i.e., the Shapley value) that the “ocean” of small shareholders is pivotal in a control contest. We then calculate the relative Shapley value ($RSHAPLEY$) as the ratio of the Shapley value to the ocean’s voting stake (Zingales, 1994; Maury and Pajuste, 2005). Under the efficient-monitoring view, a larger value of $RSHAPLEY$ is likely to be associated with more valuable excess cash holdings, because large shareholders may compete to earn the support of the ocean in a control contest. Alternatively, under the entrenchment view, $RSHAPLEY$ is irrelevant from an agency perspective because MLS extract private benefits in proportion to their voting rights, irrespective of the weight of the ocean.

Other Control Variables

To isolate the effect of cash on firm value, we control for a wide range of firm-level variables used in prior studies. Following Claessens et al. (2002) and La Porta et al. (2002), among others, we use ownership rights ($OWN1$) to control for the alignment incentive effect, and voting rights in excess of ownership rights ($VOTEMOWN1$) to control for the entrenchment effect of the largest shareholder. We also control for variables that are commonly included in market-to-book regressions. Specifically, we follow Laeven and Levine (2008) and control for growth opportunities using average sales growth (ASG) over the previous three years; leverage

(*LEV*) using the ratio of long-term debt to total assets; firm size (*SIZE*) using the natural logarithm of total assets in U.S. dollars; and investment (*CAPEX*) using the ratio of capital expenditures to total assets. We winsorize all control variables at the 1% and 99% levels to limit the influence of outliers and data coding errors.

In Table 1 we summarize the definitions and data sources for all of the regression variables. In Table 2 we report the number of observations and provide descriptive statistics by country for all variables used in the empirical tests. There is a wide variation in the number of firms in each country: the U.K. is the most representative, totaling 525 firms, followed by Japan, Germany and France which account for 472, 334 and 253 firms, respectively. Portugal is the least represented with only 21 firms. We find that firms from Finland exhibit the highest performance with an average *MTBA* of 2.11. In contrast, we report that firms from Japan and Philippines have the lowest performance with an average *MTBA* of 1.10.

Motivating our analysis, Table 2 suggests that 45% of the firms in our sample have MLS. However, this figure shows considerable cross-country variation. MLS are most common in Thailand (86% of firms) and Singapore (72% of firms), and least frequent in Japan (11% of firms), suggesting that Japanese firms often have only one controlling shareholder. The largest shareholder owns 31.30% of the cash flow rights, on average, and their voting rights exceed cash flow rights by an average of 4.94%. The ratio of the power of the second largest shareholder relative to the first largest shareholder (*VOTE21*) is 26%, on average, indicating relatively lower contestability of the power of the controlling owner by the next largest shareholder. However, like other MLS-related variables, *VOTE21* displays wide variability across the countries in our sample. For instance, the lowest wedge between the control stakes of the top two shareholders is observed in Norway and Singapore, while the highest wedge is reported in Japan and Austria. The existence of a third controlling shareholder seems to have a relevant governance effect, evident in an increase in our proxy of the largest shareholder's control contestability (*VOTE231* = 34%). Finally, we note that the highest dispersion of voting rights across the largest three shareholders, measured with *HERFDVOTE*, is observed in Austria, France, Germany, Italy and Portugal.

Table 3 reports the correlation coefficients among all regression variables. Consistent with prior research (e.g., Faulkender and Wang, 2006; Pinkowitz et al., 2006) we find that excess

cash is positively and significantly related to firm value. Although not a primary focus of our study, we find that the presence of other large shareholders in the firm positively affects its value, in step with Laeven and Levine (2008) and Attig et al. (2008, 2009). The pairwise correlation coefficients among the concurrent explanatory variables are generally low, providing some assurance that multicollinearity is not affecting our multivariate results.

4. EMPIRICAL EVIDENCE

The premise of our study is that MLS are a source of valuable internal monitoring of controlling shareholders' opportunism which, in turn, can have implications for the value of cash holdings. Our empirical framework consists in estimating the following regression model:

$$MTBA = \beta_0 + \beta_1 XCASH + \beta_2 CONTROLS + Fixed\ Effects + \xi, \quad (2)$$

where *XCASH* is obtained from equation (1) and all other controls are motivated above, and ξ designates the error term. To evaluate how MLS impact the value of cash, we estimate equation (2) based on the presence of MLS and the extent of their contestability of the controlling owner's power.⁶ Although we control for a wide array of firm-specific traits, our methodology may still suffer from common causality bias arising from an omitted variable. To reduce these potential estimation biases, we follow Attig et al. (2008) and Laeven and Levine (2008) and include country- and industry-fixed effects. In all regressions, we report *t*-statistics based on robust standard errors corrected for clustering at the country level.

4.1 Impact of MLS on the Relation between Cash and Firm Value

Table 4 presents the results of multivariate regressions with *MTBA* as the dependent variable. We begin our analysis by examining the effect of cash on firm value, independent of MLS effects. The results reported in column (1) indicate that excess cash is a material determinant of the value of the firm, as the coefficient of *XCASH* is positive and highly significant (*t*-statistic = 2.44). For the other control variables, the signs and statistical significances are generally consistent with those reported in related studies (e.g., Laeven and Levine, 2008). To some extent, the negative—but mostly statistically insignificant—estimated

⁶ This approach, which is used by Pinkowitz et al. (2006), helps avoid multicollinearity complications due to high correlations between *XCASH*, MLS proxies, and their interactions.

coefficient of the largest shareholder's ownership stake is in line with Villalonga and Amit's (2006) findings that blockholders' ownership loads negatively on firm's value, suggesting that blockholders tend to enhance their ownership in underperforming firms (Holderness, 2003).

The remaining regressions show our core results on the effects of cash on firm value, conditional on the MLS effects. In columns (2) and (3) we report regression results that test the extent to which the presence of MLS alters the valuation effects of excess cash. As explained earlier, we use two identical regression specifications: the first is for the subsample of firms with only one large shareholder and the second is for the subsample of firms with at least two controlling shareholders. Remarkably, the estimated coefficient of *XCASH* is statistically significant only in the subsample of firms with other large shareholders (*MLSD* = 1). These results suggest that investors value cash abundance in the presence of MLS, reflecting their role in constraining the diversion of corporate resources by controlling shareholders. To shed more light on this finding, we follow Pinkowitz et al. (2006) and calculate the *t*-statistic of the difference of the estimated coefficients between the two subsamples (with and without MLS).⁷ The *t*-statistic for the difference of *XCASH* estimated coefficients between the two subsamples is highly significant at 1%, indicating that *XCASH* is substantially more valued in firms with MLS than in those without MLS. This finding provides preliminary evidence that MLS alter the valuation effects of excess cash, lending support to the valuable internal corporate governance role of MLS. This evidence corroborates the empirical findings of Attig et al. (2008), and is consistent with the theoretical predictions of Bennedsen and Wolfenzon (2000), Bloch and Hege (2001), and Pagano and Röell (1998) that internal monitoring of the controlling owner is stronger in firms with MLS.

In columns (4) through (7), we extend our analysis to examine whether control contestability of the controlling owner by the next largest shareholder impacts the value of cash. Consequently, we focus on firms that have at least two large shareholders. We start by examining the impact of the dispersion of the voting rights between the two largest shareholders, which we measure with *VOTE21*. In splitting the sample of firms with MLS, we use the median of *VOTE21* to distinguish firms with low *VOTE21* (column 4) from firms with

⁷ The statistical significance reported is a *t*-test of whether the mean of the differences in the coefficients is zero, rather than a test of whether the difference of the means is zero. This is more appropriate since it directly compares the coefficients and uses the standard error of those differences to derive statistical significance.

high *VOTE21* (column 5). We find that the estimated coefficient of *XCASH* is not statistically significant in the regression specification of firms with low *VOTE21* (i.e., higher dispersion and lower contestability). In contrast, we find that the estimated coefficient of *XCASH* becomes positive and statistically significant when we run the same specification for the subsample of firms with high *VOTE21* (i.e., lower dispersion and higher contestability). This finding implies that an increase in the voting power of the second largest shareholder relative to that of the first largest shareholder enhances the value of firm's excess cash holdings and, thus, is likely to alleviate the potential agency costs associated with such excess liquid assets. This conclusion is further supported by the significant *t*-statistic for differences in the coefficient estimates across subsamples.

To shed additional light on the importance of the distribution of voting rights among large shareholders, we replicate the regressions for the subsample of firms with at least three large shareholders in columns (6) and (7). The results confirm our previous conclusion that a more balanced distribution of voting rights among the controlling shareholders enhances the governance role of MLS, evident in higher valuation of a firm's excess cash holdings.

In columns (8) and (9) we report the results for subsamples based on *HERFDVOTE*, the Herfindahl index of the differences in the voting stakes of two successive large shareholders. A low value suggests more comparable voting rights among the controlling shareholders. We expect that high *HERFDVOTE*, reflective of an uneven distribution of control rights among large shareholders, increases the likelihood of private benefits extraction and worsens the agency costs of excess cash. In line with this conjecture, the *t*-statistic of -2.62 indicates that excess cash is significantly more valuable in firms with low *HERFDVOTE* than in those with high *HERFDVOTE*. Collectively, these results lend support to the argument that a balanced distribution of votes among the controlling shareholders improves the governance role of MLS (e.g., Bennedsen and Wolfenzon, 2000; Maury and Pajuste, 2005).

In columns (10) and (11) we investigate the role of the voting power of the small shareholders (*"the ocean"*) in altering the valuation effect of firm's excess cash holdings. Supporting our earlier results on the role of MLS, the estimated coefficient of *XCASH* is only significant for the sample of firms with a higher power of minority shareholders (column (11)). The associated *t*-statistic for the difference between the subsamples confirms this result,

suggesting that the market favors more excess cash in firms in which minority interests have greater pivotal voting power.

In sum, Table 4 provides compelling evidence not only about the impact of the presence of multiple large blockholders on the value of firm's excess cash, but also about the importance of the (even) distribution of their control rights. The results in Table 4 indicate that higher control contestability of the largest shareholder by other blockholders (or by the *ocean* of minority interests) in the firm reduces agency problems and the potential extraction of private benefits from cash holdings, translating into higher value of cash.

Notwithstanding the evidence in Table 4 that controlling shareholders beyond the largest owner play an important corporate governance role by reducing the discretionary use of cash as a safeguard of minority shareholders' interests, we need to investigate the impact of MLS identity in shaping our inferences. Undeniably, families, widely-held firms, and government owners have different monitoring incentives and strategies, which in turn result in a different market perception of their governance role (evident in firm's corporate value, cost of equity, or other economic indicators).⁸ Equally important, we conjecture that the institutional environment may alter the effect of MLS on firm's excess cash value, because previous governance literature—pioneered by La Porta et al. (1999)—has established that institutional factors affect the extraction of private benefits and firm's corporate governance.

4.2 Impact of MLS and the Largest Shareholder Identity Relation between Cash and Firm Value

Prior research suggests that certain types of controlling owners are more inclined to extract private benefits. For instance, family-controlled firms are usually associated with more pronounced agency costs. Often, families are building uncommon power positions through either massive presence in the firm's management or complex ownership structures.⁹ On the other hand, widely-held institutions are in more difficult positions to divert firm resources,

⁸ See Claessens et al. (2002); Villalonga and Amit (2006); and Attig et al. (2008); among many others.

⁹ Although closely related studies by Claessens et al. (2002), Maury and Pajuste (2006), Fogel (2006), and Attig et al. (2008) suggest that agency problems are more pronounced in family-controlled firms, other studies show that minority shareholders, mainly in the U.S., benefit from the presence of family control (e.g., Anderson et al., 2003; Villalonga and Amit, 2006).

because their reputation is at stake, in addition, the size of their holdings enables them, all else equal, them to exert more efficient monitoring.

Accordingly, we extend our previous analysis to examine whether the influence of MLS on the relation between cash and firm value varies with the type of controlling owner. We expect MLS to play a more significant governance role in firms where the type of controlling shareholder is associated with high potential for expropriation, as investors anticipate a dollar of cash holdings to be worth less than a dollar if there is risk of cash diversion. Following Claessens et al. (2000) and Faccio and Lang (2002), we distinguish between three broad categories of controlling owners: families, widely-held corporations (financial and nonfinancial), and the state. For each type, we examine if the presence of MLS impacts the valuation of excess cash.¹⁰ The results of our investigation are reported in Table 5.

In columns (1) and (2) of Table 5 we study the effect of the presence of MLS in family-controlled firms, which account for 62% of our sample. The results in column (1) indicate that the estimated coefficient of *XCASH* for family firms with only one controlling shareholder (*MLSD* = 0) is not statistically significant. In sharp contrast, the estimated coefficient of *XCASH* for family firms with MLS is statistically significant at the 1% level. Moreover, the *t*-statistic for the comparison of the significance of the *XCASH* estimated coefficient between the two subsamples is positive and significant, indicating that excess cash is more valuable in those family firms with MLS. This result is particularly interesting as it not only corroborates our findings in Table 4 about the relevance of MLS in alleviating the agency costs of excess cash holdings, but also suggests a more important governance role in family-dominated firms. In addition, these relations for the subsample of family-controlled firms are the only statistically distinguishable results. Neither the estimated coefficient of *XCASH* nor the *t*-statistic displays statistical significance at conventional levels for the two other types of largest controlling shareholders. Our results are consistent with Maury and Pajuste (2005), who document that control contestability of the largest owner is more important in family firms compared to non-family firms.

In unreported regressions, we examine how the identity of the second shareholder influences the valuation of excess cash in family-dominated firms. We find that the presence of

¹⁰ We obtain similar results when we analyze subsamples based on the Herfindahl index of the difference between the voting rights (*HERFDVOTE*) and the relative Shapley value (*RSHAPLEY*).

a family or a largely-held corporation as second large shareholder enhances the value of excess cash, suggesting a more efficient monitoring by these types of MLS in family-controlled firms. In contrast, we do not find any distinguishable monitoring role of the State—as a second large shareholder—in family-controlled firms.

Collectively, the results in Table 5 imply that MLS play a more efficient monitoring role in family-controlled firms, evident in valuable excess cash holdings, plausibly in anticipation of high risk of corporate resource diversion (e.g., cash reserves).

4.3 Impact of MLS and Legal Protection on the Relation between Cash and Firm Value

Recent governance studies show that legal protection of minority investors impacts the value of cash holdings. Their main intuition, derived from agency theory predictions, is that cash holdings are less valuable in countries that facilitate the consumption of private benefits. Our study extends the analysis to examine whether internal monitoring by MLS and external governance institutions interact to influence the value of cash.

To examine the extent to which firm's institutional environment alters MLS governance role, we consider several conventional measures of the quality of the institutional environment: La Porta et al.'s (1998) anti-director rights index (*ANTIDIR*) and efficiency of the judiciary (*EFFJUD*); Law and order (*LEGAL*) and corruption (*CORRUPT*) indices collected from International Country Risk Guide (ICRG); and La Porta et al.'s (2006) index of disclosure requirements (*DISCLOSE*).¹¹

Columns (1) and (2) in Table 6 display the results of the impact of *ANTIDIR* in shaping MLS governance role. For the sample of firms in countries with weak investor protection (i.e., low anti-director rights index), the estimated coefficients of *XCASH* across the two subsamples (with and without MLS) and their difference are not statistically significant. However, for the sample of firms in countries with above-median investor protection (columns (3) and (4)), the value of excess cash in MLS firms (*MLSD* = 1) is significantly higher than the value of cash in firms without MLS (*MLSD* = 0). These findings suggest that excess cash is more valuable in

¹¹ We obtain qualitatively similar results when we use additional proxies for the quality of the legal environment, including the country's legal origin (e.g., common law versus civil law), Kaufman et al.'s (2003) rule of law index, and Djankov et al.'s (2008) anti-self-dealing index.

economies with better investor protection, particularly in firms with MLS. Similar evidence is also reported when we condition on the institutional variable *LEGAL*. Indeed, the *XCASH* estimated coefficients in columns (7) and (8), as well as the *t*-statistic for the significance of the difference between the two subsamples, indicate that excess cash is more valuable in economies with more protective legal systems, especially in firms where corporate control is shared among large shareholders. Analogous inferences are drawn from the effects of the efficiency of the judiciary (columns (11) and (12)), the level of corruption (columns (15) and (16)), and disclosure requirements (columns (19) and (20)).

In sum, two primary insights emerge from Table 6. First, firm's excess cash holdings seem to be more valuable in economies where the institutional environment is more protective of minority interests, broadly in line with cross-country studies on the value of cash holdings (Pinkowitz et al., 2006). Second, we bring new evidence that the value of excess cash holdings is not monotonic across firms in economies with a good institutional environment. We show that the presence of MLS significantly enhances the value of firm's excess cash in such economies. In other words, investors seem to value internal monitoring by large shareholders in alleviating the agency costs of excess cash holdings, mainly in the presence of strong legal protection.¹² This evidence supports the predictions of Gomes and Novaes's (2005) theoretical model that large shareholders might collude to extract private benefits in environments with weak legal protection.

4.4 Robustness Checks

In this section, we check the robustness of our inferences to sample composition and alternative specifications of our key test variable.

Sample Composition. Our sample covers firms from two broad regions: East Asia and Western Europe. Previous studies stress the importance of addressing the regional analysis of corporate governance in cross-country research. For instance, Faccio et al. (2001) document that

¹² The relation between firm-value and its determinants is heavily impacted by the strength of the legal environment, and not always in the same direction. For instance, Pinkowitz et al.(2006) shows that: "*the relation between cash holdings and firm value is much weaker in countries with poor investor protection ... the relation between dividends and firm value is weaker in countries with stronger investor protection*". It is then not surprising that MLS role is more visible when the relation between firm-value and the respective determinant is stronger, as in our case in environments with good investor protection.

the monitoring role of MLS in enhancing firm's dividend policy is more efficient in Western European firms compared to those from East Asia. Attig et al. (2008) show that the governance role of MLS, evident in lower equity financing costs, is more significant in East Asia than in Western Europe. To control for such regional effects, we examine whether our conclusions on the governance role of MLS persist in both regions. Results of our regional investigation are reported in Table 7. The results for Western Europe (columns (1) and (2)) indicate that firm's excess cash is valuable in both subsamples, with MLS, ($MLSD = 1$), and without MLS, ($MLSD = 0$). Notably, the t -statistic for the difference between the subsamples suggests that excess cash holdings are more valuable in MLS firms, which lends further support to our conclusion about the efficient role of MLS in alleviating the agency costs of firm's liquid assets. As for the East Asian subsample, excess cash holdings are only statistically significant in firms with MLS (column (4)). MLS monitoring role is also confirmed by the t -statistic for the difference between the $XCASH$ estimated coefficients of the two subsamples.

In summary, Table 7 provides two insightful results. First, excess cash holdings are positively related to firm value in Western European firms both with and without MLS, whereas in East Asia the positive effect is detected only in the subsample with MLS. This might be due to stronger legal and institutional factors in Western Europe compared to East Asia. This potential explanation reconciles with the evidence in Table 6, that cash holdings are markedly more valuable in countries with strong legal protection, in line with the findings of Pinkowitz et al. (2006). Second, MLS seem to play an efficient monitoring role in both regions, evident in the higher value of firm's excess cash.

In Table 8 we consider the stability of our results to the potential bias of sample representativeness. The U.K. and Japan dominate our sample with 525 and 472 firm observations, respectively. Excluding these two countries from our sample preserves the main finding that investors value higher excess cash in firms with MLS.

Additional Robustness Tests. For robustness, in Table 9 we reproduce our tests for alternative measures of cash: the ratio of cash to net assets, $CASH_NA$; the ratio of cash holdings to sales, $CASH_SALES$; and the industry- and country-adjusted ratio of cash holdings to net assets, ADJ_CASH_NA . Results from these alternative cash measures corroborate our main findings that cash is more valuable in firms with tighter internal monitoring by major

shareholders. We also test the stability of our results to the presence of pyramidal group affiliation in Table 10. Our argument is that excess cash holdings for pyramid-affiliated firms may be used to feed the pyramid internal capital market (Claessens et al., 2000), and thus be less valuable to investors. We do not find group affiliation to significantly impact firm value. Importantly, our earlier findings that the presence of MLS increases the valuation of excess cash are not influenced by controlling for pyramidal affiliation. Finally, we find in unreported regressions that our core results on the effect of MLS on the relation between cash holdings and firm value hold for the years 1997, 1998 and for the overall period 1996-1999.

5. CONCLUSION

This paper contributes to the literature that examines the valuation role of complex ownership structures by identifying an important channel through which the presence of MLS and the dispersion of their shareholdings influence investor estimations. We consider the governance role of MLS in altering the valuation effect of firm's excess cash holdings. Using a sample of 2,723 firms from 22 countries, we find that excess cash holdings are more valued by investors in the presence of MLS. We also find that a higher dispersion of control rights among the controlling shareholders is negatively related to the value of excess cash. More generally, we find that an increase in the contestability of the largest shareholder's control—evident in an increase of the relative voting power of the second and third largest shareholders or the pivotal voting power of the minority interests—enhances the value of firm's excess cash holdings. Our findings also suggest that MLS play a more efficient monitoring role in alleviating the agency costs of firm's cash in family-controlled firms than in non-family firms. Equally important, we show that the presence of MLS significantly increases the value of firm's excess cash in economies where the institutional environment is more protective of minority interests.

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TABLE 1
VARIABLE DEFINITION AND SOURCES

Variable	Definition	Source
<i>MTBA</i>	The market-to-book ratio of assets, where the market value of assets is the market value of equity plus the book value of assets minus the book value of equity.	Authors' calculations based on Worldscope
<i>XCASH</i>	Exponentiated residual from a country-level model of optimal (log of) cash holdings.	As above
<i>CASH_NA</i>	Ratio of cash holdings to net assets.	As above
<i>CASH_SALES</i>	Ratio of cash holdings to sales.	As above
<i>ADJ_CASH_NA</i>	Industry- and country-adjusted ratio of cash holdings to net assets.	As above
<i>MLSD</i>	Multiple large shareholder dummy variable, set to one if at least one large shareholder, beyond the largest, controls more than 10% of the voting rights, and zero otherwise.	Claessens et al. (2000) and Faccio and Lang (2002)
<i>VOTE1, VOTE2, VOTE3</i>	Ultimate voting rights of the largest shareholder, second largest shareholder, and third largest shareholder, respectively.	As above
<i>VOTE21</i>	Ratio of voting rights of the second largest shareholder to voting rights of the largest shareholder, $VOTE2/VOTE1$.	Authors' calculations based on Claessens et al. (2000) and Faccio and Lang (2002)
<i>VOTE231</i>	Ratio of voting rights of the second and third largest shareholders to voting rights of the largest shareholder, $(VOTE2+VOTE3)/VOTE1$.	As above
<i>HERFDVOTE</i>	Natural logarithm of the Herfindhal index of the differences in the voting rights of two successive large shareholders, $(VOTE1-VOTE2)^2 + (VOTE2-VOTE3)^2$. This variable is set to zero for firms for which the natural log is undefined due to equal control of the three largest shareholders.	As above
<i>RSHAPLEY</i>	Shapley value of the votes held by small shareholders (i.e., the ocean) divided by their fraction of votes.	As above
<i>OWN1</i>	Ultimate ownership rights of the largest shareholder.	As above
<i>VOTEMOWN1</i>	Ultimate voting rights of the largest shareholder minus ownership rights.	As above
<i>PYRAMID</i>	Dummy that takes value one if firm is pyramid- affiliated	As above
<i>ASG</i>	Average sales growth over the previous three years.	Authors' calculations based on Worldscope
<i>LEV</i>	Ratio of long-term debt to assets.	As above
<i>SIZE</i>	Logarithm of assets in millions of U.S. dollars.	As above
<i>CAPEX</i>	Ratio of capital expenditures to assets.	As above
<i>ANTIDIR</i>	Anti-director rights index.	La Porta et al. (1998)
<i>LEGAL</i>	Index assessing the strength, impartiality and popular observance of the law.	International Country Risk Guide
<i>EFFJUD</i>	Efficiency of the judiciary index.	La Porta et al. (1998)
<i>CORRUPT</i>	Index assessing corruption within the political system.	International Country Risk Guide
<i>DISCLOSE</i>	Disclosure requirements index.	La Porta et al. (2006)

TABLE 2
DESCRIPTIVE STATISTICS

Country	N	MTBA	CASH_NA	MLSD	VOTE21	VOTE231	HERFDVOTE	RSHAPLEY	OWN1	VOTEMOWN1	ASG	LEV	SIZE	CAPEX
Austria	49	1.17	0.16	0.25	0.12	0.14	7.77	0.33	48.97	6.33	0.06	0.13	12.63	0.08
Belgium	48	1.52	0.18	0.35	0.21	0.25	6.75	0.61	34.78	3.51	0.17	0.14	13.13	0.08
Finland	61	2.11	0.20	0.58	0.39	0.50	6.42	0.57	35.64	4.43	0.20	0.20	11.76	0.10
France	253	1.58	0.17	0.35	0.18	0.21	7.30	0.39	47.52	1.24	0.16	0.13	12.77	0.06
Germany	334	1.46	0.11	0.39	0.23	0.34	7.28	0.32	48.03	6.13	0.10	0.10	12.69	0.07
Hong Kong	130	1.18	0.22	0.32	0.15	0.18	6.57	0.75	27.64	3.90	0.06	0.09	12.59	0.04
Indonesia	39	1.58	0.26	0.54	0.28	0.33	6.77	0.59	29.13	8.61	0.36	0.21	11.72	0.03
Ireland	30	1.59	0.15	0.44	0.25	0.38	5.53	0.80	22.74	2.69	0.30	0.19	12.23	0.08
Italy	69	1.57	0.17	0.35	0.18	0.26	7.15	0.31	39.80	8.80	0.17	0.11	13.24	0.05
Japan	472	1.10	0.21	0.11	0.09	0.10	5.24	0.94	10.44	5.11	0.00	0.14	13.17	0.03
Korea (South)	53	1.11	0.13	0.22	0.14	0.15	6.23	0.86	23.55	2.00	0.06	0.16	12.40	0.03
Malaysia	104	1.30	0.14	0.58	0.28	0.35	6.35	0.72	27.15	5.06	0.12	0.12	12.34	0.04
Norway	71	1.41	0.20	0.59	0.40	0.67	5.55	0.72	25.80	7.89	0.19	0.29	12.45	0.09
Philippines	33	1.10	0.10	0.63	0.29	0.32	6.26	0.82	26.51	3.61	0.14	0.18	12.38	0.05
Portugal	21	1.37	0.03	0.35	0.14	0.20	7.16	0.29	45.52	0.61	0.21	0.18	12.67	0.08
Singapore	75	1.42	0.25	0.72	0.41	0.52	6.13	0.79	22.59	6.89	0.06	0.12	12.42	0.04
Spain	58	1.43	0.12	0.50	0.31	0.43	6.23	0.59	32.89	2.44	0.20	0.11	12.83	0.06
Sweden	95	1.68	0.15	0.53	0.35	0.48	5.94	0.71	25.30	7.70	0.18	0.19	12.47	0.05
Switzerland	87	1.69	0.18	0.36	0.19	0.27	6.97	0.37	32.75	13.22	0.11	0.19	12.70	0.05
Taiwan	55	1.55	0.14	0.51	0.30	0.43	5.55	0.85	19.94	4.37	0.10	0.14	13.32	0.05
Thailand	61	1.17	0.12	0.86	0.42	0.60	6.36	0.61	37.66	1.57	0.01	0.17	12.06	0.03
United Kingdom	525	1.79	0.16	0.46	0.31	0.38	5.79	0.78	24.18	2.52	0.16	0.12	11.77	0.07
All Countries	2,723	1.45	0.16	0.45	0.26	0.34	6.42	0.62	31.30	4.94	0.14	0.15	12.53	0.06

This table reports descriptive statistics (means) of the market-to-book ratio, cash holdings, multiple large shareholder structures and control variables for 2,723 nonfinancial firms from 9 East Asian and 13 Western European countries in 1999. The variables are: *MTBA*, ratio of the market value of assets to their book value, where the market value of assets is the market value of equity plus the book value of assets minus the book value of equity; *CASH*, exponentiated residual from a country-level model of optimal (log of) cash holdings; *MLSD*, dummy variable set to one if at least one large shareholder, other than the very largest, controls more than 10% of the voting rights, and zero otherwise; *VOTE21*, ratio of voting rights of the second largest shareholder to voting rights of the largest shareholder; *VOTE231*, ratio of voting rights of the second and third largest shareholders to voting rights of the largest shareholder; *HERFDVOTE*, natural logarithm of the Herfindhal index of the differences in the voting rights of two successive large shareholders; *RSHAPLEY*, Shapley value of the votes held by small shareholders (i.e., the ocean) divided by their fraction of votes; *OWN1*, ultimate ownership rights of the largest shareholder; *VOTEMOWN1*, ultimate voting minus ultimate ownership rights of the largest shareholder; *ASG*, average sales growth over the previous three years; *LEV*, ratio of long-term debt to assets; *SIZE*, natural logarithm of assets in millions of U.S. dollars; and *CAPEX*, ratio of capital expenditures to assets. Ownership data is from Claessens et al. (2000) and Faccio and Lang (2002).

TABLE 3
CORRELATIONS OF THE FIRM- AND COUNTRY-LEVEL VARIABLES

	<i>MTBA</i>	<i>CASH_NA</i>	<i>MLSD</i>	<i>VOTE21</i>	<i>VOTE231</i>	<i>HERFDVOTE</i>	<i>RSHAPLEY</i>	<i>OWN1</i>	<i>VOTEMOWN1</i>	<i>ASG</i>	<i>LEV</i>	<i>SIZE</i>
<i>CASH_NA</i>	0.23 (0.00)											
<i>MLSD</i>	0.06 (0.00)	-0.01 (0.69)										
<i>VOTE21</i>	0.07 (0.00)	0.01 (0.62)	0.88 (0.00)									
<i>VOTE231</i>	0.06 (0.00)	0.00 (0.82)	0.81 (0.00)	0.93 (0.00)								
<i>HERFDVOTE</i>	-0.02 (0.00)	-0.04 (0.05)	-0.30 (0.00)	-0.45 (0.00)	-0.54 (0.00)							
<i>RSHAPLEY</i>	0.01 (0.08)	0.03 (0.09)	0.15 (0.00)	0.25 (0.00)	0.20 (0.00)	-0.54 (0.00)						
<i>OWN1</i>	0.00 (0.67)	-0.05 (0.01)	-0.09 (0.00)	-0.22 (0.00)	-0.21 (0.00)	0.79 (0.00)	-0.59 (0.00)					
<i>VOTEMOWN1</i>	-0.05 (0.00)	0.00 (0.94)	0.00 (0.87)	-0.01 (0.07)	0.01 (0.42)	0.06 (0.00)	-0.07 (0.00)	-0.28 (0.00)				
<i>ASG</i>	0.14 (0.00)	0.04 (0.06)	0.05 (0.00)	0.05 (0.00)	0.04 (0.00)	0.02 (0.01)	-0.02 (0.01)	0.03 (0.00)	-0.03 (0.00)			
<i>LEV</i>	-0.11 (0.00)	-0.21 (0.00)	0.01 (0.41)	0.00 (0.70)	0.00 (0.76)	-0.03 (0.00)	0.01 (0.40)	-0.04 (0.00)	0.02 (0.01)	0.09 (0.00)		
<i>SIZE</i>	-0.13 (0.00)	-0.10 (0.00)	-0.12 (0.00)	-0.11 (0.00)	-0.10 (0.00)	-0.05 (0.00)	0.01 (0.07)	-0.09 (0.00)	0.09 (0.00)	0.00 (0.88)	0.25 (0.00)	
<i>CAPEX</i>	0.11 (0.00)	-0.01 (0.69)	0.06 (0.00)	0.05 (0.00)	0.04 (0.00)	0.06 (0.00)	-0.06 (0.00)	0.08 (0.00)	0.00 (0.61)	0.13 (0.00)	0.16 (0.00)	0.01 (0.10)

This table reports Pearson correlations between all regression variables for a sample of 2,723 nonfinancial firms from 9 East Asian and 13 Western European countries in 1999. The variables are: *MTBA*, ratio of the market value of assets to their book value, where the market value of assets is the market value of equity plus the book value of assets minus the book value of equity; *XCASH*, exponentiated residual from a country-level model of optimal (log of) cash holdings; *MLSD*, dummy variable set to one if at least one large shareholder, other than the very largest, controls more than 10% of the voting rights, and zero otherwise; *VOTE21*, ratio of voting rights of the second largest shareholder to voting rights of the largest shareholder; *VOTE231*, ratio of voting rights of the second and third largest shareholders to voting rights of the largest shareholder; *HERFDVOTE*, natural logarithm of the Herfindhal index of the differences in the voting rights of two successive large shareholders; *RSHAPLEY*, Shapley value of the votes held by small shareholders (i.e., the ocean) divided by their fraction of votes; *OWN1*, ultimate ownership rights of the largest shareholder; *VOTEMOWN1*, ultimate voting minus ultimate ownership rights of the largest shareholder; *ASG*, average sales growth over the previous three years; *LEV*, ratio of long-term debt to assets; *SIZE*, natural logarithm of assets in millions of U.S. dollars; and *CAPEX*, ratio of capital expenditures to assets. Ownership data is from Claessens et al. (2000) and Faccio and Lang (2002).

TABLE 4
MULTIPLE LARGE SHAREHOLDERS AND THE VALUE OF CASH HOLDINGS

	<i>MLSD</i>			<i>t-stat</i>	<i>VOTE21</i>		<i>t-stat</i>	<i>VOTE231</i>		<i>t-stat</i>	<i>HERFDVOTE</i>		<i>t-stat</i>	<i>RSHAPLEY</i>		<i>t-stat</i>
	0	1			Low	High		Low	High		Low	High		Low	High	
	(1)	(2)	(3)		(4)	(5)		(6)	(7)		(8)	(9)		(10)	(11)	
<i>XCASH</i>	0.0344** (2.44)	0.0111 (1.41)	0.0680*** (5.04)	(7.33)***	0.0166 (0.88)	0.0774*** (12.27)	(2.57)**	0.0255 (1.17)	0.0798*** (9.33)	(2.86)***	0.0491*** (4.47)	0.0031 (0.25)	(-2.62)**	0.0194 (1.28)	0.0444*** (3.52)	(1.75)*
<i>OWN1</i>	-0.0010 (-0.82)	0.0008 (0.55)	-0.0043* (-1.86)	(-2.19)**	-0.0031 (-1.25)	-0.0058 (-1.39)	(0.05)	-0.0054 (-1.72)	-0.0000 (-0.00)	(1.41)	0.0003 (0.09)	-0.0027* (-1.87)	(-1.37)	-0.0018 (-1.24)	0.0027 (0.93)	(1.59)
<i>VOTEMOWN1</i>	-0.0036* (-1.86)	-0.0041* (-1.96)	-0.0035 (-1.47)	(1.53)	-0.0017 (-0.42)	-0.0098 (-1.34)	(-0.70)	0.0046 (0.53)	-0.0157 (-1.25)	(-1.51)	-0.0077 (-1.13)	-0.0044 (-1.68)	(1.16)	-0.0039 (-1.29)	-0.0030 (-0.55)	(-0.71)
<i>ASG</i>	0.3996*** (4.27)	0.2899 (1.64)	0.5958*** (4.08)	(0.78)	0.3984** (2.26)	0.7417*** (4.30)	(1.20)	0.3031 (1.56)	0.8466** (2.43)	(0.33)	0.3970*** (3.40)	0.4069*** (2.84)	(-0.05)	0.4367** (2.65)	0.3810*** (3.36)	(-0.10)
<i>LEV</i>	-0.7388*** (-4.81)	-0.5942*** (-3.24)	-0.8870*** (-3.34)	(-1.73)*	-0.5063 (-1.29)	-1.3682*** (-3.06)	(-1.61)	0.4395 (0.52)	-0.8751 (-1.28)	(-1.21)	-0.7125** (-2.34)	-0.8350*** (-3.74)	(-0.35)	-0.6625*** (-3.02)	-0.8347** (-2.73)	(-0.11)
<i>SIZE</i>	0.0228 (0.80)	0.0417 (1.45)	-0.0214 (-0.64)	(-2.12)**	-0.0009 (-0.02)	-0.0546 (-1.44)	(-1.86)*	-0.0043 (-0.11)	-0.0621 (-1.22)	(-1.39)	0.0318 (1.04)	0.0142 (0.48)	(-0.73)	0.0249 (0.77)	0.0238 (0.84)	(-0.45)
<i>CAPEX</i>	1.6854*** (5.08)	1.6513*** (3.17)	1.5028** (2.62)	(-0.37)	1.0394 (1.47)	1.8903** (2.52)	(1.45)	1.0978 (0.99)	3.5736*** (2.85)	(2.15)**	2.0371*** (4.49)	1.3573*** (3.05)	(-1.40)	1.7997*** (4.16)	1.7057*** (3.48)	(-0.04)
Intercept	0.8928** (2.77)	0.7544* (1.86)	1.1658*** (2.90)	(-0.02)	0.3884 (0.75)	1.8258*** (4.13)	(0.77)	-0.4187 (-0.62)	1.3478 (1.66)	(1.43)	0.6537** (2.12)	1.0354*** (2.85)	(1.92)*	0.5290 (1.19)	0.4206 (0.77)	(-0.38)
<i>N</i>	2723	1679	1044	2723	530	514	1044	180	178	358	1366	1357	2723	1344	1379	2723
Adj-R ²	0.162	0.143	0.222		0.153	0.274		0.143	0.226		0.187	0.148		0.133	0.191	

This table presents regressions of firm valuation on excess cash holdings and control variables for 2,723 nonfinancial firms from 9 East Asian and 13 Western European countries in 1999. The dependent variable is *MTBA*, ratio of the market value of assets to their book value, where the market value of assets is the market value of equity plus the book value of assets minus the book value of equity. The independent variables are: *XCASH*, exponentiated residual from a country-level model of optimal (log of) cash holdings; *OWN1*, ultimate ownership rights of the largest shareholder; *VOTEMOWN1*, ultimate voting minus ultimate ownership rights of the largest shareholder; *ASG*, average sales growth over the previous three years; *LEV*, ratio of long-term debt to assets; *SIZE*, natural logarithm of assets in millions of U.S. dollars; and *CAPEX*, ratio of capital expenditures to assets. The splitting variables are: *MLSD*, dummy variable set to one if at least one large shareholder, other than the very largest, controls more than 10% of the voting rights, and zero otherwise; *VOTE21*, ratio of voting rights of the second largest shareholder to voting rights of the largest shareholder; *VOTE231*, ratio of voting rights of the second and third largest shareholders to voting rights of the largest shareholder; *HERFDVOTE*, natural logarithm of the Herfindhal index of the differences in the voting rights of two successive large shareholders; and *RSHAPLEY*, Shapley value of the votes held by small shareholders (i.e., the ocean) divided by their fraction of votes. Except for *MLSD*, all splits are performed with respect to the sample median. All regressions control for country- and industry-effects (not reported). Ownership data is from Claessens et al. (2000) and Faccio and Lang (2002). Robust *t*-statistics corrected for clustering at the country level are in parentheses. Superscripts *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

TABLE 5

MULTIPLE LARGE SHAREHOLDERS, THE IDENTITY OF THE LARGEST SHAREHOLDER AND THE VALUE OF CASH HOLDINGS

Identity of the largest shareholder	Family			Widely-Held Firm			State		
	<i>MLSD</i> =0	<i>MLSD</i> =1	<i>t</i> -stat	<i>MLSD</i> =0	<i>MLSD</i> =1	<i>t</i> -stat	<i>MLSD</i> =0	<i>MLSD</i> =1	<i>t</i> -stat
	(1)	(2)		(3)	(4)		(5)	(6)	
<i>XCASH</i>	0.0157 (0.87)	0.0728*** (5.61)	(4.83)***	-0.0104 (-0.55)	0.0377 (1.33)	(1.10)	0.0879 (0.98)	0.1173 (1.10)	(0.56)
<i>OWN1</i>	-0.0002 (-0.15)	-0.0059* (-1.78)	(-1.82)*	0.0107*** (5.18)	0.0012 (0.23)	(-0.55)	-0.0023 (-0.36)	-0.0144* (-1.81)	(-0.68)
<i>VOTEMOWN1</i>	-0.0063** (-2.36)	-0.0001 (-0.02)	(2.80)**	-0.0114*** (-3.85)	0.0033 (0.57)	(2.84)***	0.0357* (1.96)	-0.0158 (-0.83)	(-2.86)***
<i>ASG</i>	0.2756 (1.59)	0.5075*** (3.27)	(0.55)	-0.1248 (-0.89)	0.8849** (2.31)	(1.74)*	0.8432* (1.84)	0.2905 (0.52)	(-0.92)
<i>LEV</i>	-0.7093*** (-4.22)	-0.7933** (-2.35)	(-1.10)	-0.4893 (-0.81)	-1.0636** (-2.72)	(-2.07)*	-0.6762 (-0.59)	-0.0752 (-0.10)	(-1.55)
<i>SIZE</i>	0.0484* (1.74)	-0.0273 (-0.65)	(-1.36)	0.0758 (1.41)	0.0147 (0.52)	(-0.84)	-0.0361 (-0.57)	-0.1096 (-0.86)	(-0.01)
<i>CAPEX</i>	1.5415** (2.35)	1.1989 (1.60)	(-0.38)	1.9239* (2.06)	-0.5688 (-0.86)	(-1.55)	4.8901** (2.69)	2.4721 (0.94)	(-0.24)
Intercept	0.9275** (2.53)	0.9263* (1.92)	(-0.30)	-0.4438 (-0.94)	1.2070** (2.84)	(0.50)	2.3271* (1.87)	2.0329 (0.98)	(0.79)
<i>N</i>	1038	663	1701	489	227	716	74	86	160
Adj- <i>R</i> ²	0.130	0.235		0.167	0.173		0.426	0.249	

This table presents regressions of firm valuation on excess cash holdings and control variables for 2,723 nonfinancial firms from 9 East Asian and 13 Western European countries in 1999. The dependent variable is *MTBA*, ratio of the market value of assets to their book value, where the market value of assets is the market value of equity plus the book value of assets minus the book value of equity. The independent variables are: *XCASH*, exponentiated residual from a country-level model of optimal (log of) cash holdings; *OWN1*, ultimate ownership rights of the largest shareholder; *VOTEMOWN1*, ultimate voting minus ultimate ownership rights of the largest shareholder; *LEV*, ratio of long-term debt to assets; *SIZE*, natural logarithm of assets in millions of U.S. dollars; and *CAPEX*, ratio of capital expenditures to assets. The sample is split according to the identity of the largest shareholder and *MLSD*, a dummy variable set to one if at least one large shareholder, other than the very largest, controls more than 10% of the voting rights, and zero otherwise. All regressions control for country- and industry-effects (not reported). Ownership data is from Claessens et al. (2000) and Faccio and Lang (2002). Robust *t*-statistics corrected for clustering at the country-level are in parentheses. Superscripts *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

TABLE 6

MULTIPLE LARGE SHAREHOLDERS, LEGAL PROTECTION OF MINORITY SHAREHOLDERS AND THE VALUE OF CASH HOLDINGS

	ANTIDIR						LEGAL					
	Low		<i>t</i> -stat	High		<i>t</i> -stat	Low		<i>t</i> -stat	High		<i>t</i> -stat
	<i>MLSD</i> =0	<i>MLSD</i> =1		<i>MLSD</i> =0	<i>MLSD</i> =1		<i>MLSD</i> =0	<i>MLSD</i> =1		<i>MLSD</i> =0	<i>MLSD</i> =1	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)					
<i>XCASH</i>	0.0014 (0.12)	0.0195 (0.79)	(1.65)	0.0145* (2.02)	0.0774*** (11.74)	(11.02)***	-0.0044 (-0.37)	0.0290 (0.96)	(1.46)	0.0143 (1.79)	0.0768*** (10.63)	(9.57)***
<i>OWN1</i>	-0.0009 (-0.81)	-0.0032 (-0.83)	(-1.12)	0.0036 (1.31)	-0.0056*** (-3.63)	(-2.00)*	-0.0005 (-0.31)	-0.0105** (-2.41)	(-2.83)**	0.0016 (0.94)	-0.0022 (-1.01)	(-0.76)
<i>VOTEMOWN1</i>	-0.0033 (-1.36)	-0.0024 (-0.95)	(0.72)	-0.0051 (-1.25)	-0.0033 (-0.66)	(2.35)*	0.0044 (0.90)	0.0045 (0.53)	(0.79)	-0.0055** (-2.50)	-0.0055** (-2.72)	(1.39)
<i>ASG</i>	0.3815** (2.39)	0.4341* (1.88)	(-0.07)	0.1967 (0.68)	0.6422*** (3.86)	(0.93)	0.3357 (1.03)	0.4251* (1.94)	(-0.10)	0.2501 (1.23)	0.7065*** (4.20)	(1.14)
<i>LEV</i>	-0.7354** (-2.64)	-1.4522*** (-3.12)	(-1.47)	-0.5183 (-1.48)	-0.5093 (-1.79)	(-0.96)	-0.2879 (-1.06)	-1.2202** (-2.48)	(-2.40)**	-0.7735** (-2.82)	-0.8993** (-2.57)	(-0.67)
<i>SIZE</i>	0.0118 (0.41)	-0.0212 (-0.42)	(-0.97)	0.0696 (1.74)	-0.0296 (-0.88)	(-3.23)**	0.0329 (0.68)	0.0408 (1.04)	(0.11)	0.0445 (1.25)	-0.0452 (-1.10)	(-3.38)***
<i>CAPEX</i>	1.6820 (1.66)	1.9065* (2.04)	(0.25)	1.6019** (2.60)	1.2418 (1.77)	(-1.14)	2.0698 (1.62)	1.3028 (1.31)	(-0.76)	1.4261** (2.66)	1.4135* (1.97)	(-0.07)
Intercept	1.0972*** (3.80)	0.7870 (1.09)	(0.18)	-0.0688 (-0.10)	1.5714*** (3.50)	(-0.38)	0.2181 (0.42)	0.1635 (0.32)	(1.12)	0.3836 (0.75)	1.7464*** (3.95)	(-0.50)
<i>N</i>	738	520	1258	941	524	1465	482	373	855	1197	671	1868
Adj- <i>R</i> ²	0.161	0.206		0.140	0.241		0.088	0.189		0.166	0.244	

TABLE 6—CONTINUED

	EFFJUD						CORRUPT						DISCLOSE					
	Low		t-stat	High		t-stat	Low		t-stat	High		t-stat	Low		t-stat	High		t-stat
	MLSD=0	MLSD=1		MLSD=0	MLSD=1		MLSD=0	MLSD=1		MLSD=0	MLSD=1		MLSD=0	MLSD=1		MLSD=0	MLSD=1	
(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)							
XCASH	0.0153 (1.14)	0.0223 (0.86)	(0.95)	0.0107 (1.27)	0.0754*** (12.01)	(13.60)***	-0.0028 (-0.32)	0.0168 (0.59)	(1.04)	0.0197*** (3.20)	0.0770*** (10.54)	(12.22)***	0.0082 (0.54)	0.0396* (1.99)	(1.46)	0.0113 (1.24)	0.0728*** (5.80)	(9.38)***
OWN1	-0.0001 (-0.12)	-0.0058 (-1.53)	(-1.84)*	0.0027 (1.06)	-0.0033 (-1.10)	(-0.73)	-0.0004 (-0.17)	-0.0068 (-1.21)	(-2.60)**	0.0015 (0.79)	-0.0028 (-1.37)	(-0.96)	-0.0005 (-0.38)	-0.0022 (-0.90)	(-0.34)	0.0028 (1.04)	-0.0072** (-2.34)	(-2.78)**
VOTEMOWN1	-0.0003 (-0.11)	-0.0031 (-0.74)	(0.13)	-0.0070* (-2.08)	-0.0061** (-2.62)	(1.65)	-0.0022 (-0.59)	0.0071 (1.05)	(0.95)	-0.0065** (-2.37)	-0.0061** (-2.36)	(1.46)	-0.0021 (-0.77)	-0.0037 (-1.27)	(0.07)	-0.0069 (-1.81)	-0.0009 (-0.17)	(3.74)***
ASG	0.1929 (1.24)	0.2954* (1.86)	(-0.27)	0.3584 (1.03)	0.8484*** (5.01)	(1.46)	0.4904 (1.41)	0.1027 (0.53)	(-1.13)	0.1511 (1.00)	0.8814*** (5.57)	(3.54)***	0.4861** (2.92)	0.6145** (2.31)	(-0.03)	0.1421 (0.64)	0.5822*** (4.30)	(1.36)
LEV	-0.4202* (-1.87)	-1.0245** (-2.58)	(-1.92)*	-0.6883* (-2.19)	-0.9665** (-2.71)	(-0.76)	-0.3363 (-1.62)	-0.9254* (-2.20)	(-2.33)**	-0.9398*** (-4.76)	-1.0196** (-2.79)	(-0.39)	-1.0099** (-2.87)	-1.1373* (-2.11)	(-0.51)	-0.4083 (-1.72)	-0.9331** (-2.60)	(-1.82)
SIZE	0.0129 (0.36)	-0.0328 (-0.71)	(-1.42)	0.0683* (1.93)	0.0039 (0.18)	(-2.07)*	0.0409 (1.46)	0.0408 (1.01)	(-0.22)	0.0417 (0.81)	-0.0438 (-1.00)	(-2.97)**	-0.0209 (-1.71)	-0.0777* (-2.20)	(-1.52)	0.0797** (2.73)	0.0223 (0.74)	(-1.09)
CAPEX	1.8703* (1.85)	0.7425 (0.76)	(-0.76)	1.5654** (2.61)	1.9545 (1.88)	(0.28)	1.7411* (2.04)	0.2258 (0.20)	(-1.25)	1.4852* (2.07)	1.8938** (2.64)	(0.64)	1.1465 (1.17)	1.4649 (1.70)	(0.35)	1.9730*** (3.76)	1.3419 (1.67)	(-1.09)
Intercept	0.6114 (1.52)	1.1503* (1.87)	(-0.19)	-0.0089 (-0.01)	1.1597*** (4.27)	(0.09)	0.8193 (1.69)	0.1544 (0.31)	(0.51)	0.5071 (0.84)	1.6680*** (3.56)	(-0.25)	1.5760*** (3.63)	1.7360*** (3.40)	(-0.18)	-0.2205 (-0.62)	0.5440 (1.38)	(0.14)
N	701	506	1207	978	538	1516	908	406	1314	771	638	1409	561	401	962	1118	643	1761
Adj-R ²	0.133	0.144		0.160	0.288		0.124	0.191		0.130	0.251		0.159	0.147		0.149	0.264	

This table presents regressions of firm valuation on excess cash holdings and control variables for 2,723 nonfinancial firms from 9 East Asian and 13 Western European countries in 1999. The dependent variable is *MTBA*, ratio of the market value of assets to their book value, where the market value of assets is the market value of equity plus the book value of assets minus the book value of equity. The independent variables are: *XCASH*, exponentiated residual from a country-level model of optimal (log of) cash holdings; *OWN1*, ultimate ownership rights of the largest shareholder; *VOTEMOWN1*, ultimate voting minus ultimate ownership rights of the largest shareholder; *LEV*, ratio of long-term debt to assets; *SIZE*, natural logarithm of assets in millions of U.S. dollars; and *CAPEX*, ratio of capital expenditures to assets. The sample is split according to *ANTIDIR*, an investor protection index from La Porta et al. (1998); *LEGAL*, an index measuring the strength and popular observance of the law, from the International Country Risk Guide in 1999; *EFFJUD*, an index of the efficiency of the judiciary from La Porta et al. (1998); *CORRUPT*, index capturing political corruption from the International Country Risk Guide in 1999; *DISCLOSE*, an index measuring the disclosure requirements from La Porta et al. (2006); and *MLSD*, a dummy variable set to one if at least one large shareholder, other than the very largest, controls more than 10% of the voting rights, and zero otherwise. All regressions control for country- and industry-effects (not reported). Ownership data is from Claessens et al. (2000) and Faccio and Lang (2002). Robust *t*-statistics corrected for clustering at the country-level are in parentheses. Superscripts *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

TABLE 7
REGIONAL BREAKDOWN

	Western Europe		<i>t</i> -stat	East Asia		<i>t</i> -stat
	<i>MLSD</i> =0	<i>MLSD</i> =1		<i>MLSD</i> =0	<i>MLSD</i> =1	
	(1)	(2)		(3)	(4)	
<i>XCASH</i>	0.0181** (2.33)	0.0679*** (3.99)	(6.06)***	0.0020 (0.32)	0.0682*** (5.19)	(4.11)***
<i>OWN1</i>	0.0006 (0.37)	-0.0055* (-2.14)	(-1.83)*	0.0048 (1.45)	0.0039 (1.37)	(-1.32)
<i>VOTEMOWN1</i>	-0.0052* (-2.12)	-0.0046* (-2.15)	(1.48)	-0.0014 (-0.35)	0.0038 (0.45)	(0.81)
<i>ASG</i>	0.1887 (1.23)	0.6891*** (4.45)	(1.82)*	0.7934 (1.60)	0.0850 (0.37)	(-1.54)
<i>LEV</i>	-0.9291*** (-4.22)	-0.9962** (-2.68)	(-0.34)	-0.0592 (-0.45)	-0.8237* (-2.29)	(-2.63)**
<i>SIZE</i>	0.0479 (1.20)	-0.0260 (-0.62)	(-2.57)**	0.0333 (0.93)	0.0117 (0.20)	(-0.45)
<i>CAPEX</i>	2.1492*** (3.15)	1.1940 (1.72)	(-0.62)	0.4986 (0.44)	2.3168** (2.65)	(1.06)
Intercept	0.3951 (0.68)	0.8851 (1.45)	(-0.66)	0.5187 (1.13)	0.8027 (1.21)	(1.07)
<i>N</i>	996	705	1701	683	339	1022
Adj- <i>R</i> ²	0.131	0.240		0.066	0.122	

This table presents regressions of firm valuation on excess cash holdings and control variables for 2,723 nonfinancial firms from 9 East Asian and 13 Western European countries in 1999. The dependent variable is *MTBA*, ratio of the market value of assets to their book value, where the market value of assets is the market value of equity plus the book value of assets minus the book value of equity. The independent variables are: *XCASH*, exponentiated residual from a country-level model of optimal (log of) cash holdings; *OWN1*, ultimate ownership rights of the largest shareholder; *VOTEMOWN1*, ultimate voting minus ultimate ownership rights of the largest shareholder; *ASG*, average sales growth over the previous three years; *LEV*, ratio of long-term debt to assets; *SIZE*, natural logarithm of assets in millions of U.S. dollars; and *CAPEX*, ratio of capital expenditures to assets. The sample is split according to region and *MLSD*, a dummy variable set to one if at least one large shareholder, other than the very largest, controls more than 10% of the voting rights, and zero otherwise. All regressions control for country- and industry-effects (not reported). Ownership data is from Claessens et al. (2000) and Faccio and Lang (2002). Robust *t*-statistics corrected for clustering at the country-level are in parentheses. Superscripts *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

TABLE 8
EXCLUSION OF THE U.K. AND JAPAN

	Excluding the U.K.			Excluding Japan			Excluding the U.K. & Japan		
	<i>MLSD=0</i>	<i>MLSD=1</i>	<i>t-stat</i>	<i>MLSD=0</i>	<i>MLSD=1</i>	<i>t-stat</i>	<i>MLSD=0</i>	<i>MLSD=1</i>	<i>t-stat</i>
	(1)	(2)		(3)	(4)		(5)	(6)	
<i>XCASH</i>	0.0011 (0.16)	0.0354* (1.87)	(2.68)**	0.0140 (1.66)	0.0690*** (5.24)	(7.04)***	0.0014 (0.15)	0.0370* (1.92)	(2.51)**
<i>OWN1</i>	-0.0004 (-0.31)	-0.0037 (-1.20)	(-1.64)	0.0004 (0.26)	-0.0045* (-1.90)	(-2.00)*	-0.0011 (-0.91)	-0.0038 (-1.23)	(-1.39)
<i>VOTEMOWN1</i>	-0.0038 (-1.69)	-0.0031 (-1.08)	(0.95)	-0.0036 (-1.55)	-0.0034 (-1.40)	(1.27)	-0.0029 (-1.23)	-0.0030 (-1.02)	(0.63)
<i>ASG</i>	0.4692** (2.57)	0.4810** (2.54)	(-0.33)	0.2441 (1.47)	0.5973*** (4.10)	(0.99)	0.4170** (2.44)	0.4847** (2.56)	(-0.14)
<i>LEV</i>	-0.5358** (-2.54)	-1.0754*** (-3.23)	(-2.42)**	-0.6923*** (-3.58)	-0.9605*** (-3.45)	(-1.31)	-0.6698** (-2.73)	-1.1742*** (-3.38)	(-1.75)*
<i>SIZE</i>	0.0153 (0.64)	-0.0350 (-0.94)	(-1.61)	0.0354 (0.96)	-0.0202 (-0.58)	(-1.73)*	-0.0025 (-0.09)	-0.0345 (-0.89)	(-1.10)
<i>CAPEX</i>	1.4657** (2.39)	1.5926** (2.30)	(-0.09)	1.5633** (2.54)	1.5845** (2.61)	(-0.07)	1.3247* (1.74)	1.7316** (2.42)	(0.19)
Intercept	1.1571*** (3.90)	1.0790* (1.92)	(0.86)	0.4540 (1.04)	1.1530** (2.75)	(-0.21)	0.8872** (2.71)	1.0686* (2.00)	(0.65)
<i>N</i>	1387	811	2198	1259	992	2251	967	759	1726
Adj- <i>R</i> ²	0.135	0.170		0.128	0.219		0.132	0.165	

This table presents regressions of firm valuation on excess cash holdings and control variables for 2,723 nonfinancial firms from 9 East Asian and 13 Western European countries in 1999. The dependent variable is *MTBA*, ratio of the market value of assets to their book value, where the market value of assets is the market value of equity plus the book value of assets minus the book value of equity. The independent variables are: *XCASH*, exponentiated residual from a country-level model of optimal (log of) cash holdings; *OWN1*, ultimate ownership rights of the largest shareholder; *VOTEMOWN1*, ultimate voting minus ultimate ownership rights of the largest shareholder; *ASG*, average sales growth over the previous three years; *LEV*, ratio of long-term debt to assets; *SIZE*, natural logarithm of assets in millions of U.S. dollars; and *CAPEX*, ratio of capital expenditures to assets. The results are presented after excluding firms from the U.K. and Japan separately, as well as both countries together. The sample is split according to *MLSD*, a dummy variable set to one if at least one large shareholder, other than the very largest, controls more than 10% of the voting rights, and zero otherwise. All regressions control for country- and industry-effects (not reported). Ownership data is from Claessens et al. (2000) and Faccio and Lang (2002). Robust *t*-statistics corrected for clustering at the country-level are in parentheses. Superscripts *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

TABLE 9
ALTERNATIVE MEASURES OF CASH

	MLSD		<i>t</i> -stat	MLSD		<i>t</i> -stat	MLSD		<i>t</i> -stat
	0	1		0	1		0	1	
	(1)	(2)		(3)	(4)		(5)	(6)	
<i>CASH_NA</i>	0.0873** (2.80)	0.1255*** (4.34)	(2.65)**						
<i>CASH_SALES</i>				0.0306 (1.55)	0.0942*** (3.92)	(3.34)***			
<i>ADJ_CASH_NA</i>							0.0821*** (2.84)	0.1304*** (4.42)	(3.07)***
<i>OWN1</i>	0.0005 (0.44)	-0.0040 (-1.68)	(-2.79)**	0.0004 (0.38)	-0.0040 (-1.64)	(-2.88)***	0.0005 (0.41)	-0.0040 (-1.70)	(-2.71)**
<i>VOTEMOWN1</i>	-0.0055** (-2.78)	-0.0025 (-0.87)	(2.09)**	-0.0053** (-2.69)	-0.0025 (-0.88)	(2.13)**	-0.0054** (-2.80)	-0.0024 (-0.79)	(2.10)**
<i>ASG</i>	0.2450 (1.47)	0.5499*** (4.22)	(0.97)	0.2665 (1.60)	0.5697*** (4.36)	(0.94)	0.2535 (1.51)	0.5518*** (4.19)	(0.94)
<i>LEV</i>	-0.2812 (-1.53)	-0.6402* (-1.89)	(-1.86)*	-0.4401** (-2.63)	-0.8269** (-2.61)	(-1.95)*	-0.3117* (-1.72)	-0.6626* (-1.95)	(-1.87)*
<i>SIZE</i>	0.0275 (1.39)	-0.0517* (-1.79)	(-2.43)**	0.0291 (1.41)	-0.0502* (-1.75)	(-2.31)**	0.0272 (1.39)	-0.0511* (-1.78)	(-2.30)**
<i>CAPEX</i>	1.5984*** (2.96)	1.8567*** (3.37)	(0.34)	1.5609*** (3.06)	1.8526*** (3.28)	(0.23)	1.6206*** (2.98)	1.8045*** (3.24)	(0.29)
Intercept	1.1921*** (5.27)	1.6165*** (4.07)	(-0.06)	1.0005*** (3.69)	1.4956*** (3.87)	(-0.04)	0.9209*** (3.12)	1.2679*** (3.26)	(-0.10)
<i>N</i>	1731	1117	2848	1730	1117	2847	1731	1117	2848
Adj- <i>R</i> ²	0.144	0.214		0.132	0.202		0.142	0.214	

This table presents regressions of firm valuation on excess cash holdings and control variables for 2,723 nonfinancial firms from 9 East Asian and 13 Western European countries in 1999. The dependent variable is *MTBA*, ratio of the market value of assets to their book value, where the market value of assets is the market value of equity plus the book value of assets minus the book value of equity. The independent variables are: *CASH_NA*, the ratio of cash to net assets; *CASH_SALES*, the ratio of cash holdings to sales; *ADJ_CASH_NA*, the country- and industry-adjusted ratio of cash holdings to net assets; *OWN1*, ultimate ownership rights of the largest shareholder; *VOTEMOWN1*, ultimate voting minus ultimate ownership rights of the largest shareholder; *ASG*, average sales growth over the previous three years; *LEV*, ratio of long-term debt to assets; *SIZE*, natural logarithm of assets in millions of U.S. dollars; and *CAPEX*, ratio of capital expenditures to assets. The

splitting variable is *VOTE21*, ratio of voting rights of the second largest shareholder to voting rights of the largest shareholder; all splits are performed with respect to the sample median. All regressions control for country- and industry-effects (not reported). Ownership data is from Claessens et al. (2000) and Faccio and Lang (2002). Robust *t*-statistics corrected for clustering at the country level are in parentheses. Superscripts *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.

TABLE 10
PYRAMIDAL GROUP AFFILIATION

	<u>MLSD</u>			<i>t</i> -stat	<u>VOTE21</u>		<i>t</i> -stat	<u>VOTE231</u>		<i>t</i> -stat	<u>HERFDVOTE</u>		<i>t</i> -stat	<u>RSHAPLEY</u>		<i>t</i> -stat
	0	1			Low	High		Low	High		Low	High		Low	High	
	(1)	(2)	(3)		(4)	(5)		(6)	(7)		(8)	(9)		(10)	(11)	
<i>XCASH</i>	0.0342** (2.43)	0.0111 (1.39)	0.0678*** (5.01)	(7.32)***	0.0165 (0.87)	0.0772*** (11.46)	(2.56)**	0.0256 (1.23)	0.0786*** (9.30)	(2.85)***	0.0491*** (4.46)	0.0031 (0.25)	(-2.63)**	0.0194 (1.29)	0.0443*** (3.48)	(1.76)*
<i>PYRAMID</i>	-0.0353 (-0.65)	-0.0112 (-0.25)	-0.0423 (-0.47)	(-0.21)	-0.0717 (-0.65)	-0.0375 (-0.33)	(0.71)	0.0076 (0.03)	-0.1103 (-0.38)	(-1.15)	0.0033 (0.06)	0.0111 (0.16)	(0.97)	-0.0021 (-0.03)	-0.0127 (-0.19)	(-0.65)
<i>OWN1</i>	-0.0011 (-0.86)	0.0008 (0.49)	-0.0044* (-1.87)	(-2.25)**	-0.0031 (-1.25)	-0.0060 (-1.50)	(-0.12)	-0.0054 (-1.68)	-0.0005 (-0.04)	(1.27)	0.0003 (0.10)	-0.0026* (-1.77)	(-1.47)	-0.0018 (-1.23)	0.0025 (0.81)	(1.71)
<i>VOTEMOWN1</i>	-0.0029 (-1.44)	-0.0040** (-2.12)	-0.0023 (-0.74)	(1.66)	0.0001 (0.02)	-0.0084 (-0.97)	(-0.65)	0.0044 (0.45)	-0.0117 (-1.10)	(-1.53)	-0.0078 (-1.13)	-0.0045 (-1.68)	(1.22)	-0.0039 (-1.14)	-0.0025 (-0.35)	(-0.60)
<i>ASG</i>	0.3998*** (4.27)	0.2901 (1.64)	0.5952*** (4.09)	(0.78)	0.3883** (2.13)	0.7449*** (4.37)	(1.23)	0.3035 (1.62)	0.8566** (2.54)	(0.34)	0.3970*** (3.41)	0.4066*** (2.85)	(-0.04)	0.4368** (2.66)	0.3812*** (3.37)	(-0.11)
<i>LEV</i>	-0.7374*** (-4.80)	-0.5932*** (-3.23)	-0.8882*** (-3.35)	(-1.74)*	-0.5012 (-1.28)	-1.3742*** (-3.09)	(-1.62)	0.4404 (0.52)	-0.8989 (-1.35)	(-1.23)	-0.7126** (-2.34)	-0.8364*** (-3.74)	(-0.35)	-0.6623*** (-3.00)	-0.8342** (-2.74)	(-0.10)
<i>SIZE</i>	0.0232 (0.80)	0.0418 (1.44)	-0.0207 (-0.60)	(-2.13)**	0.0010 (0.02)	-0.0543 (-1.42)	(-1.89)*	-0.0045 (-0.11)	-0.0610 (-1.18)	(-1.37)	0.0317 (1.03)	0.0142 (0.48)	(-0.79)	0.0249 (0.77)	0.0240 (0.85)	(-0.41)
<i>CAPEX</i>	1.6813*** (5.10)	1.6480*** (3.21)	1.5137** (2.66)	(-0.36)	1.0585 (1.54)	1.8994** (2.50)	(1.44)	1.0952 (0.98)	3.5841** (2.82)	(2.18)**	2.0367*** (4.46)	1.3613*** (3.11)	(-1.41)	1.7991*** (4.19)	1.7052*** (3.47)	(-0.03)
Intercept	0.8988** (2.82)	0.7555* (1.86)	1.1648*** (2.86)	(0.00)	0.3705 (0.69)	1.8402*** (4.30)	(0.79)	-0.4150 (-0.56)	1.3286 (1.61)	(1.63)	0.6533** (2.13)	1.0348*** (2.88)	(1.88)*	0.5295 (1.23)	0.4223 (0.77)	(-0.34)
<i>N</i>	2723	1679	1044	2723	530	514	1044	180	178	358	1366	1357	2723	1344	1379	2723
Adj-R ²	0.162	0.143	0.221		0.152	0.272		0.137	0.221		0.187	0.147		0.132	0.191	

This table presents regressions of firm valuation on excess cash holdings and control variables for 2,723 nonfinancial firms from 9 East Asian and 13 Western European countries in 1999. The dependent variable is *MTBA*, ratio of the market value of assets to their book value, where the market value of assets is the market value of equity plus the book value of assets minus the book value of equity. The independent variables are: *XCASH*, exponentiated residual from a country-level model of optimal (log of) cash holdings; *OWN1*, ultimate ownership rights of the largest shareholder; *VOTEMOWN1*, ultimate voting rights minus ultimate ownership rights of the largest shareholder; *ASG*, average sales growth over the previous three years; *LEV*, ratio of long-term debt to assets; *SIZE*, natural logarithm of assets in millions of U.S. dollars; and *CAPEX*, ratio of capital expenditures to assets. The splitting variables are: *MLSD*, dummy variable set to one if at least one large shareholder, other than the very largest, controls more than 10% of the voting rights, and zero otherwise; *VOTE21*, ratio of voting rights of the second largest shareholder to voting rights of the largest shareholder; *VOTE231*, ratio of voting rights of the second and third largest shareholders to voting rights of the largest shareholder; *HERFDVOTE*, natural logarithm of the Herfindhal index of the differences in the voting rights of two successive large shareholders; and *RSHAPLEY*, Shapley value of the votes held by small shareholders (i.e., the ocean) divided by their fraction of votes. Except for *MLSD*, all splits are performed with respect to the sample median. All regressions control for country- and industry-effects (not reported). Ownership data is from Claessens et al. (2000) and Faccio and Lang (2002). Robust *t*-statistics corrected for clustering at the country level are in parentheses. Superscripts *, **, *** denote statistical significance at the 10%, 5% and 1% levels, respectively.