Effect of corporate governance and country-level governance quality on the level of cash holdings in Latin America

Abstract:

We study the effect that company-specific governance provisions and the country-level governance quality have on the level of cash holdings in five Latin American countries over the period 2010 – 2015. Our results show that in countries with lower regulatory quality, weaker rule of law, and higher political instability and more violence, the level of cash holdings are higher. The results are statistically significant at a 1 percent level and robust to different specifications. We also show that corporate governance plays a role in decreasing the cash holdings to avoid agency problems between the manager / owner and the minority investors.

Keywords: Cash holdings, corporate governance, country-level governance, corruption, rule of law, regulatory quality.

Introduction and Literature Review:

There is ample evidence on the effect that corporate governance has on the level of corporate cash holdings in developed markets. Jensen (1986) supports the notion that excessive corporate cash reserves affects negatively the value of the firm in the context of the agency relationship that exists between managers and shareholders. In Latin America however, the main agency problem that exists is between minority shareholders and the main owners who in general are still managing and controlling the corporation. Pinkowitz et al. (2006) investigate how minority shareholders in countries with poorer investor protection value cash holdings. According to their result, the value of the firm's cash holdings is lower in countries with weaker investor rights, because controlling shareholders might use their position to extract private benefits from cash holdings, at the expense of minority investors. It is also important to recognize that cash reserves are subject to expropriation not only by entrenched managers but also by other external parties such as the government (Myers and Rajan, 1998). Therefore, in the Latin American context, it interesting to see how government quality and its interaction with the insider agency problem affect corporate cash holding decisions.

Opler et al. (1999) and Mikkelson and Partch (2003) recognize that keeping an excess cash reserve provides the corporations with the flexibility in making investment decisions in countries where raising money might be costly. Indeed, companies based in Latin America, which are subject to higher institutional and economic volatility might benefit of holding higher levels of cash reserves to avoid raising capital in the capital markets where the cost of funding on average is higher

than in developed financial markets. Hennessy and Whited (2005) provides evidence consistent with firms holding higher cash levels when the firm's ability to raise cash is lower. Chong and López-de-Silanes (2007) find that in Latin America, where countries offer less investor protection than the average protection found in French civil law countries, investors' expropriation risk and the cost of capital are higher, and the level of financial development is relatively low.

In Latin America, where in general the protection to investors' rights is very low, the potential agency problem between minority shareholders and the managers-owners clearly indicates that excess cash holdings are detrimental to the value of the corporation. In contrast to this however, the higher external cost of funding faced by corporations explained by low development of the financial markets and the low confidence in the institutional environment (i.e. low investor's protection) would indicate the need to hold higher levels of cash reserves to avoid losing good investment opportunities.

From the literature, country-specific governance variables such as protection of investors' rights, the level of corruption, regulatory compliance, and in general the rule of law, affect the level of cash holdings. Dittmar et al. (2003) analyzed cross-country differences in cash holdings. According to their analysis, the level of corruption, country risk, and the protection of shareholders' rights affect the average level of cash holdings. Francis et al. (2013), studying the relationship between corporate governance and investment-cash flow sensitivity, find that better corporate governance diminishes the dependence on internally generated cash flows, especially in countries with weaker country-level governance. Although, not directly associated to cash holdings, the investment-cash flow sensitivity has a positive relationship to the levels of cash flows: The more sensitive is the investment to the internally generated cash flow, the higher the levels of cash the company has to hold in order to avoid missing a good investment opportunity.

Recent articles study the effect of corporate governance on the levels of cash holdings in some emerging market economies. We previously mention the results of Francis et al. who study a sample of emerging market economies including Brazil and Chile with just few observations. Hall et al. (2014) study the determinants of cash holdings in private and public companies based in 20 emerging markets of Central and Eastern Europe. They find that private firms hold more cash than public firms do. They also find that firms based in market-oriented countries hold more cash reserves. Chen et al. (2014) study the effect of government quality on corporate cash holdings for a sample of Chinese public firms. They find that the level of cash is negatively related to the quality of government: Higher quality of government implies lower average level of cash reserves. How corporate governance interacts with country-governance variables is an open research question in Latin America, given that, to the best of our knowledge, there is no prior research that addresses this topic. Until recently, corporate governance data have not been included in most of the financial databases that cover Latin American public corporations. One reason is that corporations provide this information voluntarily in most of the countries.

Specifically, we are interested in knowing the effect that corporate governance plays in countries with not only low levels of investors' rights protection but also high volatility in their institutional environment, including high perception of political stability, corruption and low regulatory quality. One the one hand, corporate governance tools such as the number of independent board members or CEO duality are not completely enforceable in countries where investor's protection is weak. In this case, country governance and firm-specific corporate governance may complement each other. On the other hand, given the specific agency relationship between the manager / owner and minority investors that exists in Latin America, the manager / owner has incentives to expropriate minority investors, obtaining internal rents such as higher salaries or lower dividend payments. Firms with credible good governance mechanisms such as a higher proportion of institutional ownership should be more valuable in countries with weak country-governance because they can reduce more agency costs. In this case, company-specific governance works as a substitute for country-specific governance. An important contribution of our paper is to study the effect of corporate governance on cash holdings controlling for the quality of country-level governance in five Latin American countries.

Howard et al. (2013) show that higher levels of cash flows not necessarily are detrimental to firm value, if the cost associated to raising external capital is high. Firms in Latin America face higher cost of capital due to less developed capital markets and low investor's protection. In this environment, higher average levels of cash flows will be prevalent to avoid foregoing a +NPV project. In addition, when investor's protection is low and contracts are less subject to be enforced, minority investors cannot force the manager / owner to lower the free cash flow that might be subject to private rents enjoyed by managers / owners. We expect therefore a negative relationship between the quality of governance at the country level and the levels of cash holdings.

In countries with low quality of governance, where cash holdings might be subject to expropriation, a good corporate governance might work as a substitute for the deficient country-level governance environment. Strong corporate governance can signal to minority investors that managers / owners are under control. For example, a higher percentage of independent directors in the board of directors might signal effective monitoring activities. Institutional ownership can also bring additional external overseeing to the managerial decision making. We identify two potential effects over the level of cash holdings. On the one hand, we posit that good corporate governance in countries with low governance quality can effectively signal effective monitoring, allowing companies to increase the optimal level of cash holdings when facing high cost of raising capital. On the other hand, good corporate governance in the presence of weak country governance may affect negatively the level of cash holdings decreasing the level of cash to avoid the potential expropriation of value by the manager

/ owner in detriment of minority shareholders. In this latter case, company-specific governance provisions are substituting the role that strong country-level governance characteristics should have played.

Data and Variable Definitions:

We study public corporations based in five Latin American countries during the period 2010 - 2015: Brazil, Chile, Colombia, Mexico, and Peru. We classify the variables used under three categories. First, our dependent variable proxies for the level of cash in the firm. Consistent with the literature in this area, we define the level of cash as the ratio of cash and equivalents divided by total assets net of cash and equivalents.

The second set of variables relates to the corporate governance hypotheses we are testing. We can further divide these corporate governance variables into two subcategories: company-specific and country-specific. Our company-specific variables proxy for the quality of governance within the corporation. For each of the companies under analysis, we constructed three governance-related variables using information gathered from Bloomberg. First, the variable board size is equal to the number of directors in the board. Two additional board-related variables are the proportion of independent directors in the board and a dummy variable that takes the value of one if the President is the Chairman of the Board, and zero otherwise. We call this variable CEO-Chairman duality dummy. Our last variable is the proportion of ownership that belongs to institutional shareholders.

We estimate the effect of the quality of country governance on corporate cash holdings using the World Governance Indicators (WGI) published annually by the World Bank. These variables are (1) Control of Corruption, (2) Government Effectiveness, (3) Political Stability and Absence of Violence/Terrorism, (4) Rule of Law, and (5) Regulatory Quality. Each of these variables takes a value that belongs to normal distribution with mean equal to zero and standard deviation equal to one. In general, weak lower values are associated to weak country governance.

Finally, we use some company-specific variables that consistently the literature in the area shows that they affect the level of cash holdings. We use the log of total sales to control for the size of the company. To control for profitability, we use Return on Assets (ROA), which we calculate dividing Operating Profit by Total Assets. Finally, we estimate financial leverage dividing Total Financial Debt over Total Assets.

Results

Table 1 shows descriptive statistics associated to the countries under analysis. In each cell, we include the mean, the median, and the number of observations in parentheses. The first row shows statistics for the level of cash holdings. Chile and Colombia are the countries where companies hold less cash, measured by both the mean the median. In the table, we show several corporate governance variables. The number of members in the board of directors reaches the highest level in Mexico (median of 13) and its lowest number in Colombia (median of 7). According to the data, the proportion of independent directors is higher in Colombia with a median of 57.24 percent while Brazil and Chile present the lowest proportion with approximately a median of 28.5 percent. CEO duality is never more than 50 percent but is more common in Mexico and Peru (mean of 22 percent and 39 percent respectively) than in Brazil, Chile, and Colombia where CEO Duality occurs in less than 10 percent of the cases. Finally, the median value of the proportion of institutional ownership is the highest in Brazil (median of 56.24 percent) and decreases in alphabetical order reaching its lowest level in Peru with 11.36 percent.

Table 1 also presents mean and median values associated to the World Governance Indicators for each of the five Latin American countries under analysis. Chile stands out as an example of good governance to the other countries in Latin America. With the exception of regulatory quality, Brazil, Colombia, Mexico, and Peru are below the worldwide average in every governance indicator given their negative values. Mexico and Peru get the worst WGI indexes associated to corruption. Colombia presents the lowest WGI statistic associated to Political Stability and Absence of Violence, followed by Peru and Mexico. Finally, in the last four rows we present the statistics associated to company-specific control variables. If analyze the median values, the companies under analysis are greater in size in Brazil, followed by companies in Mexico and Colombia. Companies in Brazil and Chile enjoy higher Tobin's Q ratios. In addition, Brazilian and Mexican companies have higher median return on assets (ROA). Finally, debt ratios are constant and the number of observations is low. We use only financial debt to measure the level of total debt and that seems to limit the number of available information given the very high number of missing observations.

In table 2, we show results of a univariate analysis where we divided the data into two subsamples. The first subsample titled Low Cash Holdings is composed of companies with lower levels of cash flows relative to the median level of cash flow in the country where the company is incorporated. Likewise, the second subsample named High Cash Holdings is composed of companies with higher than median levels of cash flows in their respective countries. In each cell of the first two columns, we show the mean and the standard error associated to the variable under analysis. We intent to show if, at the univariate level, there is a statistical difference in the mean values of company- and country-specific governance variables.

In each of the cells of the first two columns, we show mean values and standard errors for the parameters under analysis. The last column shows two statistics. The first statistic is the parametric t-test for difference of means. The second statistic is the one associated to the Brown-Forsythe Robust Tests of Equality of Means.

The results in table 2 shows the first statistical evidence of the effect of corporate governance in the level of cash holdings. Two out of three of the corporate governance values are different in the two subsamples created. CEO Duality is significantly more frequently associated with low cash holdings. This result at the univariate level is significant at a 5 percent level and contradicts our initial hypothesis. Unless companies with low cash holdings are located in countries with relatively better country governance, we expect companies with CEO duality to have more cash holdings that might be subject to pecuniary consumption by the manager / owner, given that CEO duality is a sign of bad corporate governance in the context of an agent relationship. Second, a higher percentage of institutional ownership is associated to higher corporate cash holdings. This result is statistically significant at a 1 percent and it is consistent with the idea that institutional ownership signals effective monitoring of the manager / owner in countries with weak governance quality, enabling companies to increase the level of cash holdings to avoid raising costly external capital to fund investment opportunities.

Table 2 shows that companies bigger in size tend to have larger cash holdings as a proportion of net assets. This result is statistically significant at one percent level. Finally, the quality of governance at the country level does not seem to affect statistically the level of cash holdings. In table 2, we have not controlled for the year under analysis. WGI indexes varies per year and per country but are common to all the companies in a given year and country.

In order to control for the joint effect of country- and company-specific governance variables on the level of cash holdings, table 3 shows the results associated to a Time-Series Cross-Sectional regression controlling for the years and countries under analysis. Columns in table 3 are associated to results of four different regressions. In each cell, we present the coefficient and the t-values in parentheses. In column 1, we show Panel Data regression results where the dependent variable is the level of cash holdings and the independent variables are classified into three different categories: corporate governance variables, country governance variables proxied by the WGI country indexes, and company-specific control variables, including size and profitability. We include the number of board members and the squared value of the number of board members given that the literature have found that the size of the board has a non-linear relationship with financial performance, productivity, and other performance-related variables. We expect ex-ante a similar relationship with the level of cash. The more the number of members the more monitoring of the manager / owner but up to a point given that a board with too many members exacerbates a free-riding problem among the members bringing less oversight. Our results indicate

that board members do not explain the level of cash holdings in the companies under analysis. This result is consistent across all the regression specifications we show in table 3.

We discuss first the analysis of the quality of governance at the country level. First, there is a negative relationship between the World Governance Indicators associated to the Regulatory Quality, Rule of Law, and Political Stability / Absence of Violence and Terrorism, and the level of Cash Holdings. The results are robust and statistically significant at a 1 percent level of confidence. This means that in countries with a bad regulatory framework, high political instability and violence, and with weak rule of law, the levels of cash flows will be higher. Recall that the greater the value of WGI indicators is, the better is the governance in general. Therefore, a negative coefficient means that a better country-level governance implies lower levels of cash holdings. This result suggests that when the country-level governance is weak, cash holdings are higher. In an agency context, this result implies that when the governance at the country level is weak, the manager / owner have higher levels of free cash flows that are subject to expropriation from minority investors. However, this result is also consistent with higher levels of cash flows in countries where the cost of raising money is higher, which usually happens in countries where country-governance is weak.

The only WGI indicator with a positive coefficient is the WGI variable related to corruption. This result is also significant at a 1 percent level. This result implies that higher corruption levels (low values of the WGI corruption variable) are associated with low levels of cash holdings. In this case, companies are reducing the excess free cash flow that might be subject to expropriation by the government via corruption. In other words, in countries where corruption is high, companies do not want to show higher levels of cash holdings.

Now we turn our attention to the corporate governance variables. Column 1 in table 3 shows that the greater the number of independent directors, the more the level of cash holdings. This result is statistically significant at a 10 percent level of confidence and it is consistent with the hypothesis that given better oversight by independent directors, companies are able to hold greater levels of cash. In column 2, we further explore the role that independent directors play in environments with low and high levels of cash flows by creating an interaction variable to identify the effect that independent directors have in companies with low and high cash holdings. Remember from our discussion of the WGI variables that, in general, the worse is the country governance quality the higher is the level of cash holdings. Column 2 in table 3 shows that in companies with low cash, a higher proportion of independent directors implies even less cash holdings. This result is statistically significant at a 1 percent level. This result is also consistent with a monitoring role of independent directors in companies with low cash levels, which generally are based in countries where the quality of governance (rule of law, regulatory quality) is weak.

We obtain a similar result when we analyze the percentage of institutional ownership. Regressions (1) and (2) show a negative relationship between the proportion of institutional ownership and the level of cash holdings in Latin America. The results are statistically significant at least at a 10 percent level. This result is consistent with the monitoring role that institutional owners exercise over the management of the company in an agency context relationship. A higher level of institutional ownership forces managers / owners to lower the level of cash holdings, decreasing the possibility of using the excess cash for pecuniary purposes. Using an interaction variable, column (4) shows that in companies with low cash levels, more based in countries with weak country governance standards, having a higher proportion of institutional owners decreases even more the optimal level of cash flows. This result is significant at a 1 percent level.

References

Chen D., Li S., Zezhong Xiao J., Zou, H., 2014, The effect of government quality on corporate cash holdings. Journal of Corporate Finance 27, 384–400.

Chong, A., López-de-Silanes, F., 2007. Investor Protection and Corporate Governance: Firm Level Evidence Across Latin America. Stanford University Press, New York.

Dittmar, A., Mahrt-Smith, J., Servaes, H., 2003. International corporate governance and corporate cash holdings. J. Financ. Quant. Anal. 38, 111–133.

Francis, B., Hasan, I., Song L., Waisman M., 2013. Corporate governance and investment-cash flow sensitivity: Evidence from emerging markets. Emerging Markets Review 15, 57–71.

Hall T., Mateus C., Bezhentseva Mateus I., 2014, What determines cash holdings at privately held and publicly traded firms? Evidence from 20 emerging markets. International Review of Financial Analysis 33, 104–116.

Hennessy, C., and T. Whited, 2005, Debt dynamics, The Journal of Finance 60, 1129–1165.

Howard W. H. Chan, Yufei Lu, Hong F. Zhang, 2013, The effect of financial constraints, investment policy, product market competition and corporate governance on the value of cash holdings. Accounting and Finance 53, 339–366.

Jensen, M. C., 1986, Agency costs of the free cash flow, corporate finance and takeovers, The American Economic Review 76, 323–329.

Mikkelson, W. H., and M. M. Partch, 2003, Do persistent large cash reserves hinder performance?, Journal of Financial and Quantitative Analysis 38, 275–294.

Myers, S.C., Rajan, R.G., 1998. The paradox of liquidity. Q. J. Econ. 113, 733–771.

Opler, T., L. Pinkowitz, R. Stulz, and R. Williamson, 1999, The determinants and implications of corporate cash holdings, Journal of Financial Economics 52, 3–46.

Pinkowitz, L., R. Stulz, and R. Williamson, 2006, Does the contribution of corporate cash holdings and dividends to firm value depend on governance? A cross-country analysis, The Journal of Finance 61, 2725–2751.

Table 1

Country Descriptive Statistics

	Brazil	Chile	Colombia	Mexico	Peru
Cash Holdings	.08219 .05143 (721)	.0585 .0467 (552)	.06251 .0386 (409)	.1012 .0732 (477)	.1757 .0509 (2118)
Board Size	9.2512 9.0000 (386)	8.5722 9.0000 (166)	7.2750 7.0000 (120)	13.3567 13.0000 (199)	11.4925 11.0000 (67)
Percentage of Independent Directors	32.2674 28.5710 (344)	27.0087 28.5000 (77)	52.0965 57.1420 (107)	49.5869 50.0000 (180)	44.4910 44.4440 (53)
CEO Duality	.0997 .0000 (381)	.0059 .0000 (167)	.0000 .0000 (109)	.2153 .0000 (195)	.3880 .0000 (67)
Percentage of Institutional Ownership	53.2193 56.2450 (188)	45.7662 39.7230 (214)	37.1101 30.4190 (216)	26.3479 17.6050 (197)	34.2949 11.35800 (983)
WGI Corruption	-.03047 -.02481 (828)	1.4538 1.4787 (630)	-.28301 -.3015 (709)	-.3242 -.2806 (553)	-.3346 -.3408 (3305)
WGI Regulatory Quality	.1447 .1032 (828)	1.4683 1.4694 (630)	.2056 .1562 (709)	.3616 .3842 (553)	.3376 .4008 (3305)
WGI Rule of Law	-.27342 -.3005 (828)	1.2970 1.2739 (630)	-.5673 -.4688 (709)	-.4981 -.4611 (553)	-.6457 -.6170 (3305)
WGI Political Violence, Terrorism	-.0734 -.0975 (828)	.5610 .4571 (630)	-1.7019 -1.7847 (709)	-.5278 -.6818 (553)	-.9344 -.9752 (3305)
Size	8.7870 8.7888 (722)	8.1324 7.9823 (552)	7.7575 8.2897 (420)	8.4048 8.3449 (477)	5.1029 5.0528 (2120)
ROA	6.7021 5.3645 (696)	4.5393 3.8935 (539)	1.7230 2.1126 (385)	6.0881 5.8373 (464)	1.3557 3.7829 (1943)
Tobin's Q	42.2870 1.3649 (656)	1.3649 1.2063 (530)	1.1624 1.0859 (365)	1.6648 1.4335 (437)	2.2169 1.1061 (1125)
Debt Ratio	.4788 .4580 (58)	.5273 .5056 (49)	.6925 .6831 (21)	.4935 .5057 (57)	0.67 .5288 (36)

Table 2

Univariate Analysis – Determinants of Cash Holdings

	Low Cash Holdings	High Cash Holdings	t-statistics
Cash Holdings	.02099 (.0003)	.2303 (.0207)	-10.094*** -9.485***
Percentage of Independent Directors	39.3952 (1.1480)	39.4201 (.9068)	-.017 .000
CEO Duality	.1448 (.01878)	.0992 (.01260)	2.093** 4.062**
Percentage of Institutional Ownership	33.8224 (1.2939)	40.9919 (1.1987)	-4.035*** 16.520***
WGI Corruption	-.04758 (.01302)	-.05433 (.01297)	.367 .135
WGI Regulatory Quality	.45320 (.00906)	.4583 (.0091)	-.398 .158
WGI Rule of Law	-.3106 (.0138)	-.2946 (.0139)	-.816 .665
WGI Political Violence, Terrorism	-.5997 (.01407)	-.6053 (.0134)	.287 .082
Size	6.5326 (.0493)	6.9875 (.0596)	-5.870*** 34.472***
ROA	4.3517 (.1946)	2.5993 (1.2685)	1.805 1.864

Table 3

Time Series Cross-Sectional Regression to Test the Effect of Country-Level Governance and Corporate Governance on the Level of Cash Holdings

	(1)	(2)	(3)	(4)
Intercept	7.595**	6.880**	6.320**	8.227***
	(2.652)	(2.610)	(2.142)	(3.164)
Board Size	-.032	-.024	-.017	-.016
	(-1.432)	(-1.175)	(-.797)	(-.780)
Board Size Squared	.001	.001	-.026	.001
	(1.581)	(1.313)	(-1.151)	(.820)
Percentage of Independent Directors	.001*	.001*	.001	.0005
	(1.908)	(1.843)	(1.639)	(.429)
Interaction Percent. Of Indep. Directors w/ low Cash holdings		-.001***		
		(-2.873)		
CEO Duality	.020	.011	.040	.023
	(.908)	(.523)	(1.568)	(1.127)
Interaction CEO Duality w/ low cash holdings			-.070	
			(-1.474)	
Percentage of Institutional Ownership	-.001**	-.0005*	-.0002	7.659E-5
	(-2.290)	(-1.795)	(-1.538)	(.211)
Interaction Percent. Institutional Owner. w/ low Cash Holdings				-.001***
				(-3.067)
WGI Corruption	14.722***	13.269***	13.034***	13.309***
	(3.638)	(3.545)	(3.143)	(3.606)
WGI Regulatory Quality	-8.643***	-7.891***	-7.543***	-8.103***
	(-3.480)	(-3.445)	(-2.949)	(-3.595)
WGI Rule of Law	-7.050***	-6.510***	-7.003***	-4.404**
	(-3.706)	(-3.713)	(-3.737)	(.028)
WGI Political Violence / Terrorism	-3.593***	-3.140***	-3.187	-2.916***
	(-4.283)	(-4.001)	(-3.658)	(-3.689)
Debt Ratio	.003	.035	.019	.015
	(.063)	(.800)	(.409)	(.362)
Size	-.008	-.010	-.013	-.007
	(-1.081)	(-1.377)	(-1.573)	(-.973)
Return on Assets	.003	.003*	.003	.002
	(1.562)	(1.887)	(1.307)	(1.073)