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The determinants of corporate cash management policies: Evidence from around the world☆

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ABSTRACT

We examine the determinants of corporate cash management policies across a broad sample of international firms. We document that firms in countries with strong legal protection of minority investors are more likely to decrease their cash holdings in response to an increase in cash flow than are firms in countries with weak legal protection. This relationship is most pronounced for firms that are financially constrained and those with high hedging needs. More importantly, we do not find evidence that financial development plays an incremental impact on the cash flow sensitivity of cash, after controlling for the effect of legal protection. Therefore, we argue that the legal protection of investors (rather than financial development) represents the first-order effect in influencing international firms' cash management policies. The results are robust to alternative specifications. In general, our findings reinforce the importance of country-level legal protection of investors in mitigating the effects of firm-level financial constraints and hedging needs on corporate cash management policies.

1. Introduction

The stream of research on corporate cash management policies has received increasing attention in recent years. Early studies by Keynes (1936), Jensen and Meckling (1976), Myers (1984), Jensen (1986), and Myers and Majluf (1984) have debated the potential costs and benefits of holding cash. Related studies by Kim et al. (1998) and Opler et al. (1999) have examined the effects of various financial variables on the *level* of cash reserves for U.S. firms. More recently, a number of papers have documented evidence that corporate governance at both country and firm levels could potentially influence

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corporate cash holdings in U.S. and international firms.[1] However, the conclusions from this strand of research are relatively mixed.[2]

Almeida et al. (2004) argue that examining *changes* in cash holdings is perhaps a more viable means determining a firm's demand for liquidity from a theoretical perspective. The imperfection in capital markets gives rise to a deviation between the costs of internal and external financing. Firms anticipating a higher cost of external financing are thereby constrained in their investments and financial policies. A survey by Graham and Harvey (2001) reveals that top managers value financial flexibility when making important corporate decisions. One way for constrained firms to achieve this flexibility is to alter their *current* financial policies to meet *future* investment needs. To be more specific, Almeida et al. (2004) propose that corporate demand for liquidity can be empirically tested by measuring the marginal propensity to save cash out of current cash flows in order to fund more profitable future investments, i.e., the *cash flow sensitivity of cash*.

Almeida et al. (2004) further argue that the cash flow sensitivity of cash is better at capturing the role of financial constraints than is the investment-cash flow sensitivity, a measure that has generated numerous criticisms in the empirical corporate finance literature.[3] They develop a model which predicts that the cash flow sensitivity of cash should be positive and significant only for financially constrained firms. Their empirical results strongly support their prediction, which attests to the importance of cash management for financially constrained firms as opposed to unconstrained firms.

The objective of this study is to examine the role of legal protection on the cash management policies of international firms around the world. We use three measures of country-level legal protection of investors from La Porta et al. (1998, 2006), and Djankov et al. (2008). Using financial data from 39 countries over the period 1995 to 2004, we find that firms from countries with strong legal protection are more likely to decrease their cash holdings as a result of an increase in cash flow than are firms from countries with weak legal protection. This finding is consistent with the notion that effective legal systems ease firms' access to the external capital markets. As a result, firms in countries with strong legal protection of investors face fewer restrictions in raising external capital and thus are less likely to save cash from current cash flows to fund their future investments than are their counterparts in countries with weak legal protection.

The study that is closest to ours is by Khurana et al. (2006). They examine the effect of financial development on the cash flow sensitivity of cash in an international setting and document evidence that is consistent with the hypothesis that the cash flow sensitivity of cash is negatively related to the degree of financial development. Their argument is based on the premise that the presence of financial constraints deters economic growth and that economic development helps to mitigate this problem (Love, 2003).

However, previous literature has suggested that cross-country variation in stock market development is itself a function of country-level legal protection of minority investors (La Porta et al., 1997; Beck and Levine, 2005). Moreover, Pinkowitz et al. (2006) stress the relevance of country-level legal protection in cross-country corporate governance studies.

Whether legal protection of investors or financial development is more important in influencing the cash flow sensitivity of cash is still debatable and is an empirical issue that we attempt to address in this paper. To achieve this, we include both the legal protection variables and the measure of financial development in the regression specification. We find that legal protection is consistently related to the cash flow sensitivity of cash in the expected manner. In contrast, we do not find evidence that financial development plays an incremental impact in influencing the cash flow sensitivity of cash, after controlling for the effect of legal protection. Therefore, we argue that the legal protection of investors (rather than financial development) is the first-order effect in influencing international firms' cash management policies.

Next, we explore whether the effect of financial constraints on cash management policies as documented by Almeida et al. (2004) differ for firms in different countries. We document that financially constrained firms exhibit a higher marginal propensity to save cash in response to cash flows only in countries with low legal protection of investors. Moreover, the presence of legal protection of investors serves as an important mechanism to mitigate the incentives of financially constrained firms to accumulate cash reserves in anticipation of future investment needs.

Finally, we examine the implications of hedging needs on international firms' cash management policies. We observe that the negative relationship between legal protection and the cash flow sensitivity of cash is stronger for firms with high hedging needs than for firms with low hedging needs. This finding indicates that strong legal protection also helps to ease the tendency of firms with high hedging needs to increase their cash holdings.

In summary, our findings provide valuable contributions to the current literature by reinforcing the important role that legal protection of investors plays in corporate cash management policies around the world. More importantly, we further examine whether strong legal protection can help to mitigate the effects of firm-level financial constraints and hedging needs on the cash flow sensitivity of cash. In this respect, our paper provides a clearer insight on how international firms' cash management policies are determined. In particular, managers should recognize how country-level institutional factors such as legal protection of

[1] See Dittmar et al. (2003), Pinkowitz et al. (2006), Dittmar and Mahrt-Smith (2007), Harford et al. (2008), and Kalcheva and Lins (2007) for a sample of recent representative work on the relationship between corporate governance mechanisms and cash holdings.

[2] While Dittmar et al. (2003) document a significantly negative relationship between country-level legal protection and cash holdings in their sample of international firms, Harford et al. (2008) find an opposite relationship between firm-level shareholder rights and cash holdings in their U.S. sample. Combining both firm-level and country-level measures of corporate governance, Kalcheva and Lins (2007) confirm the evidence of a negative relationship between firm-level governance mechanisms (the degree of managerial control) and cash holdings in an international setting. Moreover, the negative effect of firm-level corporate governance on cash holdings is more pronounced for firms in countries with weak legal protection of investors. In addition, Caprio et al. (2009) find that firms located in countries with a higher threat of political extraction hold less cash than are firms in countries located with lower threat of extraction.

[3] See, for example, Kaplan and Zingales (1997, 2000) and Fazzari et al. (2000).