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The use of foreign currency derivatives, corporate governance, and firm value around the world

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ABSTRACT

This paper examines the impact of currency derivatives on firm value using a broad sample of firms from thirty-nine countries with significant exchange-rate exposure. Derivatives can be used for managers' self-interest, for hedging or for speculative purposes. We hypothesize that investors can appeal to a firm's internal (firm-level) and external (country-level) corporate governance to draw inferences on a firm's motive behind the use of derivatives, since well-governed firms are more likely to use derivatives to hedge rather than to speculate or pursue managers' self-interest. Consistent with this explanation, we find strong evidence that the use of currency derivatives for firms that have strong internal firm-level or external country-level governance is associated with a significant value premium.

1. Introduction

Risk management theories (e.g., Smith and Stulz (1985), Bessembinder (1991), Froot et al. (1993), and Leland (1998)) suggest that the use of derivatives for risk management purposes adds value to a firm by reducing expected taxes or financial distress costs, by mitigating underinvestment or by allowing a firm to increase its debt capacity and take advantage of debt tax-shields without an increase in risk. On the other hand, managerial risk aversion motives may lead managers to use derivatives to engage in risk management activities to protect themselves and not necessarily to benefit shareholders (Stulz (1984) and Smith and Stulz (1985)). Finally, firms may also use derivatives to speculate (Geczy et al. (2007)), an activity which we should again not expect to benefit investors on average.

A large part of the previous empirical literature focuses on a firm's decision to use derivatives and their impact on risk. This literature examines whether the use of derivatives is consistent with existing theories of hedging (e.g., Tufano (1996), Geczy et al. (2007), Haushalter (2000), and Graham and Rogers (2002)), whether derivatives are used for speculative purposes (Geczy et al. (2007)), or whether the use of derivatives impacts risk (e.g., Guay (1999), Allayannis and Ofek (2001), Bartram et al. (2011), and Zhang (2009)). More recently, another stream of research has examined directly the impact of the use of derivatives on firm value (e.g., Allayannis and Weston (2001), Guay and Kothari (2003), Jin and Jorion (2006), Mackay and Moeller (2007), and Bartram, Brown, and Conrad (2011)). Specifically, Allayannis and Weston (2001) find that the use of foreign currency derivatives is positively associated with firm value in a large sample of U.S. nonfinancial firms with exposure to exchange rates, Mackay and Moeller (2007) find a similar effect for the use of derivatives in a sample of oil refiners and Bartram et al. (2011) find a positive valuation effect in a large sample of nonfinancial firms from 47 countries.[3] However, Guay and Kothari (2003) argue that based on the magnitudes of the notional amounts of the derivatives used by U.S. firms, the value implications of their use should be modest. Further, Jin and Jorion (2006) find no value impact for the use of derivatives in a sample of oil and gas producers.

While most of this prior work has focused on the unconditional (average) effect of the use of derivatives on firm value and has found mixed results, in this paper we develop a conditional test which should help clarify the value implications of the use of derivatives. Specifically, we argue that due to information asymmetries (see e.g., Geczy et al. (2007)), investors cannot easily distinguish between the alternative uses of derivatives (for hedging, for speculation, or for managerial benefits), thus making earlier tests noisier and harder to interpret. Further, we argue that investors can appeal to a firm's corporate governance environment to draw inferences on its motive behind the use of derivatives. Hence, we expect that the use of derivatives should be positively associated with firm value for well-governed firms.

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[3] Bartram et al. (2011) also note that the premium they find is sensitive to endogeneity concerns and measured with low precision.

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Using a broad cross-country sample of ADR firms from thirty-nine countries with significant exchange-rate exposure, we exploit differences in internal (firm-level) as well as external (country-level) corporate governance structures across countries and examine their implications for the value of currency derivatives usage. An international setting allows us to obtain a large degree of variation in the corporate governance environment by exploiting the considerable heterogeneity that exists in firm-level and country-level agency problems around the world. Therefore, our setting should make our tests sharper. The main hypothesis we test is that strong corporate governance should be associated with value-increasing use of derivatives.[4]

We first examine whether firm-level internal corporate governance influences the effect of currency derivatives use on firm value. Many studies show that firm value is adversely affected by the degree of managerial agency costs (e.g., see Shleifer and Vishny (1997), Claessens et al. (2002), and Lins (2003)). In this context, a firm's internal governance may influence how firms use derivatives contracts.[5] For example, corporate insiders and inside blockholders may have different incentives than the outside investors and this difference in incentives can adversely affect the use of derivatives and their impact on firm value.[6] In particular, to the extent that corporate insiders do not bear the consequences of their decisions, they may use derivatives for reasons other than hedging. Therefore, managerial blockholders may have fewer incentives to appropriately manage their firm's risks. We hence hypothesize that the use of derivatives should not be positively associated with firm value if managers are also the largest blockholders in the firm, that is, if there is a misalignment in the incentives between inside blockholders and outside investors.

On the other hand, non-managerial blockholders may function as monitors of managers' actions and thus mitigate managerial agency costs. Therefore, the existence of non-managerial blockholders, such as institutions, should encourage the use of derivatives for value-maximizing hedging purposes. Thus, we hypothesize that the use of derivatives is associated with higher firm value when outside blockholders are present. Foreign firms provide a natural setting to examine the impact of firm governance on the value-implications of derivatives use since managerial agency costs are more severe (e.g., LLSV (1998) and Lins (2003)), and hence may play an even more important role in determining the effect of derivatives use on firm value. [7]

Second, we examine the potential effects of the external corporate governance environment on the relationship between the use of currency derivatives and firm value. Because strong country-level corporate governance can mitigate the potentially adverse effects of agency costs, we hypothesize that the use of currency derivatives is value-increasing for firms located in countries with stronger investor protection (LLSV (1998), and LLSV (2002)). This hypothesis is in the same spirit to hypotheses on the value of cash holdings for well-governed firms (Dittmar and Mahrt-Smith (2007)), and particularly in countries with strong shareholder protection (Pinkowitz et al. (2006) and Kalcheva and Lins (2007)).

Third, we examine how the interaction between firm-level internal governance and country-level external governance influences the effect of derivatives use on firm value. Strong investor protection should reduce managerial agency costs and positively affect the impact of the use of derivatives on firm value. However, the international corporate governance literature emphasizes that investor protection can be established both by country level legal protections as well as by firm level governance structures (e.g., see LLSV (2000), Lins (2003), and Dyck and Zingales (2004)). Therefore, we expect the positive relation between the use of foreign currency derivatives and firm value to be most pronounced when both the firm and country level investor protection environments are strongest.

To compare results with the previous literature we start our analysis by examining the use of currency derivatives without taking into account differences in corporate governance. Similar to Allayannis and Weston (2001), we separate between firms with and without ex-ante exposure to exchange rates through foreign sales. We employ their methodology that uses the Tobin's Q ratio as a proxy for firm value and a dummy indicating whether a firm uses currency derivatives or not controlling for factors that affect firm value such as size, leverage, and profitability.[8]

We find a positive and significant association between a firm's use of currency derivatives and value for the sample of firms with exposure, suggesting that on average the use of foreign currency derivatives for foreign firms with exchange-rate exposure adds value. The magnitude of the premium is 10.7% in the baseline OLS specification though it can be higher in some of the other specifications that we employ. While this is undoubtedly large compared to Allayannis and Weston's (2001) premium of 4.9% for U.S. firms, our sample of foreign firms have twice as large exchange-rate exposure as the sample of U.S. firms employed in Allayannis and Weston (2001).[9] In addition, exchange-rate volatility is higher for currencies in countries outside the U.S. (Dominguez and Tesar (2006)), which should also contribute to a higher premium for foreign firms using FCDs.

Next, we examine the value implications of the use of derivatives conditional on corporate governance. Consistent with our hypothesis that corporate governance should help investors distinguish between the alternative uses of derivatives, we find that firms with strong corporate governance (both at the firm- and country-level) are rewarded with a premium for the use of foreign currency derivatives. The use of derivatives by firms with weak corporate governance does not carry a significant premium but we do not find this activity to be value-destroying either. Our results are robust to the use of several alternative proxies for firms' internal and external corporate governance environment.

Last, we examine how the interaction of firm-specific internal corporate governance and country-specific external governance impacts the value of currency derivatives usage. We find that the relation between the use of foreign currency derivatives and firm value is more pronounced when both the internal firm level governance and the

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[4] With the exception of Bartram et al. (2011), which also examines the value implications of the use of derivatives across countries, much of the previous work using cross-country or non-U.S. data has tested for the various hedging theories across countries. Bartram et al. (2011) find mixed results regarding the value of the use of derivatives; however, like previous work with U.S. data, they focus on the unconditional (average) value effect. Previously, Lel (2009) finds that internal and external corporate governance are both important determinants in the decision to use currency derivatives. More broadly, Bartram et al. (2009) examine the use of financial derivatives in a large sample of nonfinancial firms and find evidence of common firm factors such as leverage, liquidity, and growth opportunities predicting derivatives use, however, not all of them in a manner consistent with theory. Allayannis et al. (2003) find evidence that macro-factors such as interest-rate differentials affect the derivatives use of East Asian firms in a manner less consistent with hedging behavior and more consistent with speculation. Faulkender (2005) reaches a similar conclusion examining, in a sample of U.S. firms, interest-rate exposure through debt and the impact of interest-rate derivatives use on it. Prior to these papers, work on derivatives usage outside the U.S. was limited to single-country studies (e.g., among others, Berkman et al. (1997), Alkeback and Hagelin (1999), Bodnar (1999), and Bodnar et al. (2003)).

[5] Tufano (1996) documents that the existence of non-managerial blockholders reduces the extent of the use of derivatives for hedging in a sample of gold-mining firms. However, when differentiating among different types of blockholders, Lel (2009) finds that inside blockholders reduce the likelihood of derivatives use for hedging whereas outside blockholders and blockholders that are financial institutions or institutional investors increase the likelihood of derivatives use for hedging.

[6] See Holderness (2003) for a survey of the effects of blockholders on firm value.

[7] See Denis and McConnell (2003) and the citations contained therein.

[8] This methodology has been used extensively in corporate finance: research areas in which Q is used to measure firm value include cross-listings (Doidge et al. (2004)), corporate diversification (Lang and Stulz (1994), and Servaes (1996)), takeovers (Servaes (1991)), equity ownership (La Porta et al. (2002) and Lins (2003)), and hedging (Allayannis and Weston (2001) and Jin and Jorion (2006)).

[9] Specifically, the median ratio of foreign sales to total sales for our sample is 63% versus only 31% for the U.S. sample in Allayannis and Weston. The 90th percentile in the Allayannis and Weston sample has a foreign sales-to-total sales ratio of 70%.