

Asymmetric Information and Corporate Risk Management by Using Foreign Currency Derivatives

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ABSTRACT

We examine how information asymmetry affects a firm's incentive to hedge versus speculate or take a view by using foreign currency derivatives. We find a quadratic relation between asymmetric information and a firm's risk management activities. In particular, we find firms facing medium level of information asymmetry are more likely to hedge while firms with very high and low levels of asymmetric information tend to speculate. Moreover, we find our results are driven by firms operating in highly competitive industries.

***Keywords:** Hedging, Speculation, Derivatives, Asymmetric Information, Competition*

***JEL classification:** D84, D82, D41*

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Corporate management and academic researches have long recognized the importance of corporate risk management in achieving shareholder value maximization. However, incidences of risk mismanagement, negligence and outright speculative behavior by companies have also impaired shareholder wealth significantly. Derivative usage has allowed management to either diminish or magnify the risk exposure and firm value at the same time.

Financial theories have proposed several reasons for corporate risk management in an imperfect world. Convex tax schedules (Mayers and Smith (1982), Smith and Stulz (1985)), costly financial distress (Smith and Stulz (1985), Mayers and Smith (1990)), costly external finance (Bessembinder (1991), Froot, Scharfstein and Stein (1993)) are some major arguments that support corporate risk management activities, even though shareholders may diversify on their own. Managerial risk aversion (Stulz (1984), Tufano (1996)) provides yet another reason for why managers may choose to hedge in order to increase their own welfare.

While these theories of risk management focus on reasons firms might hedge (i.e., use contracts in order to reduce some measure of risk). There are a number of arguments that can be made in support of the idea that some managers use derivatives to speculate, where speculation is defined as the actively taking derivatives positions based on a market view.

Speculation may well be value enhancing due to the option characteristics of equity (Black and Scholes (1973)) and the wealth transfer from debt holder to equity holders (Jensen and Meckling (1976) and Myers (1977))¹. Other factors such as management compensation (Smith and Stulz (1985), Tufano (1996)) and private information (Ljungqvist (1992), DeGeorge and Zeckhauser (1996)) also provide management incentives to speculate. Géczy, Minton, and Schrand (2007) report survey findings that indicate that 61 out of 186 firms sometimes speculate and 13 frequently speculate.

One underlying factor that drives both hedging and speculation is the level of information asymmetry (IA) faced by the firm, since IA is highly correlated with cost of financing, firm quality, and firm valuation. Extant studies (DeMarzo and Duffie (1991), DeMarzo and Duffie (1995) Breeden and Viswanathan (1996)) have shown that firms with a higher level of asymmetric information are more likely to hedge to reduce the uncertainty that is out of managers' control.

However, Ljungqvist (1992) argues that when the degree of information asymmetry becomes too high, low quality corporations would have the most incentive to speculate, since "bankruptcy option" is the most valuable for these firms. Sapa and Shin (2007) argue that reducing asymmetric information by disclosing derivatives use information is likely to induce speculation.

Based on the theories discussed above, how asymmetric information affects a firm's hedge/speculation decision becomes an empirical question. In this paper, we examine the relationship between IA and a firm's hedging versus speculation decision

¹ Géczy, Minton, and Schrand (2007) find that firms view speculation as a positive NPV project when they have a comparative information advantage relative to the market.

through the use of foreign currency derivatives and find a “U” shaped function between them. Furthermore, risk management decisions are also heavily influenced by the extent of competition in an industry. Allayannis and Ihrig (2001), Allayannis and Weston (1999) find that firms in more competitive industries face greater exchange-rate risk and use more derivatives. Consequently, the relationship between IA and hedging/speculation can be different for firms operating in different industry structures. We find empirical evidence that the “U” shaped relation between IA and hedging/speculation is primarily driven by firms in highly competitive industries.