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Corporate debt issues and interest rate risk management: Hedging or market timing?

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Abstract

Apart from the obvious reasons for raising capital, a firm can hedge its interest rate exposure by issuing debt, the value of which moves in an opposite direction from the value of its assets as interest rate varies. We examine whether firms in the UK market make full use of debt issuances for hedging purposes or if they have other considerations. Our evidence shows that firms' choices of debt issues are primarily driven by debt market conditions in an effort to lower their costs of capital rather than managing their firm-specific interest rate exposures. This suggests that market timing, as opposed to hedging, is the primary motivation behind corporate debt issuances.

JEL classifications: G30; G32; G14

Keywords: Risk management; Debt issuance; Hedging; Market timing

1. Introduction

Standard risk management theory emphasizes the role of derivatives in reducing corporate cash flow exposure. In practice, however, derivatives usage appears to be small compared to the magnitude of firms' overall assets (Brown, 2001; Guay and Kothari, 2003), and firms with more volatile cash flows, such as small firms, make far less use of

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derivatives than otherwise more stable (large) firms (Stulz, 1996). This evidence contradicts the ''variance-minimization'' notion of modern risk management theory and indicates that the impact of derivatives usage on corporate risk management is limited. Why do corporations not fully hedge their risk exposure with derivatives? Do they use means other than derivatives to manage their risk?

In theory, firms can manage risk exposure by means other than derivatives. For instance, corporate bonds can be employed as an instrument of interest rate risk management (Grinblatt and Titman, 2002; Stulz, 2003). Firms are able to ''immunize firm value against changes in interest rates to some degree by matching the interest rate sensitivity of their assets and liabilities through active interest rate risk management (analogous to duration matching for financial intermediaries)...'' (Bartram, 2002, p. 108). The value of a firm's assets, V_A, is the sum of its equity, V_E, plus debt, V_D (i.e., $V_A = V_E + V_D$). If, for instance, a firm measures the risk exposure of its equity as having a positive interest rate sensitivity (its share price goes up when interest rates rise, i.e., $\partial V_E/\partial r > 0$), issuing a bond with a negative interest rate sensitivity, i.e., $\partial V_D/\partial r < 0$, can reduce the interest rate exposure of its overall assets. Thus firms are able to hedge against interest rate exposure by correctly designing the interest rate sensitivity of new debt issues. In other words, once managers have measured the interest rate exposure of the firm or an investment project, they can reduce its exposure by issuing bonds, the value of which moves in an opposite direction from the value of the firm or the project as the interest rate varies. It is thus less necessary for these firms to enter into accompanying derivative contracts. For this reason, corporate managers need to address the problem of how to design a reasonable yield and maturity structure for the newly issued debt with a target interest rate sensitivity to match its initial risk.

If corporate bonds per se are an effective instrument of interest rate risk management, the question arises as to whether firms in practice make full use of debt issues for the purpose of hedging or if they have other considerations in mind. In this paper, we examine this question. Focusing on firms' newly issued debts, we examine the latent motivations of corporate debt issues from the perspective of interest rate risk management. We test whether firms, when issuing debt, consider hedging interest rate exposure as their main objective or if there are other goals behind the debt issue decisions. If firms are hedging, the choices regarding the interest rate exposure of their debt should be primarily driven by the interest rate sensitivity of the firms' value or expected cash flows. In the case that a firm's value is sensitive to the interest rate, the firm can hedge its overall interest rate exposure by entering a debt position that has a desirable interest rate sensitivity, for example, choosing the floating rate for the new debt to offset the volatility of the firm's cash flows that are caused by interest rate variability.

Recent studies reveal, however, that the majority of firms do not systematically hedge their risk exposure. The extent to which they choose to hedge depends on the market views of expected volatilities (Bodnar et al., 1998). Most firms adopt ''profit-oriented and forecast-based'' hedging strategies (Glaum, 2002, p. 121) and adjust them correspondingly with the market variability. In other words, they are timing the market. They attempt to hedge risks with a fluky view that they could correctly predict the future market movements. If this is the case, it implies that firms believe they are capable of timing the markets and thereby reducing their costs of capital. In this respect, debt issues could mainly be driven by the debt market conditions. Therefore, the question examined in this paper is whether corporate debt issues are determined by the intention of hedging or market timing?