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Convertible Bonds from the Investment and Financing Perspectives

A thesis presented in fulfilment of the requirements for the degree of

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ABSTRACT

This thesis examines the hybrid features, particularly the equity options, of convertible bonds from both the investment and financing perspectives. First, this thesis presents a survey of the theoretical and empirical aspects of convertible bond pricing to identify those areas of research that may improve the valuation process. The pricing of these securities is compromised by the presence of complex option features and difficulty in clearly measuring those risk factors needed as inputs to standard option models. As a result, various empirical studies identify pricing errors that vary with the sample period, valuation method and assumptions made. Accordingly, this thesis provides valuable insights into the degree of mispricing, using a unique sample of pure US convertible bonds that controls for the complex optionality present in these securities. When applied to real-time trade prices, an underpricing of 6.31% is reported for daily data from October 26, 2004 to June 30, 2011. The stochastic nature of volatility is shown to have a significant impact on the pricing of convertible bonds, while liquidity is also an important explanatory variable. The deep underpricing during the Global Financial Crisis highlights the importance of market conditions and the temporal rather than systematic nature of the pricing errors. Alternately, from the financing perspective, this thesis investigates the motivation for the issuance of convertible bonds by multinational corporations (MNCs). One benefit of internationalisation is the ability to diversify the source and type of debt, although doing so incurs agency costs. Consequently, to mitigate these costs, existing studies find that MNCs typically have lower debt ratios than domestic corporations. One key limitation of these studies is their failure to recognise the heterogeneity of debt, specifically the equity options that may be present in the bonds issued by MNCs. Results show the way debt heterogeneity can be used to
mitigate the agency costs that arise from international financing. Debt heterogeneity is in fact linked to internationalisation and a desire of the MNC to mitigate agency costs. The results hold after controlling for market conditions including the recent Global Financial Crisis and the subsequent period of quantitative easing.
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