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Short sales, price pressure, and the stock price response to convertible bond calls ☆

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Abstract

The announcement of a convertible bond call is associated with an average contemporaneous abnormal stock price decline of 1.75% and an ensuing price recovery in the conversion period. A price fall and the subsequent recovery suggest price pressure as the explanation for the announcement effect. However, in general the option to convert is not exercised early and hence, the increase in the number of shares outstanding does not occur at the announcement date. Instead, this paper argues and provides evidence that hedging-induced short selling causes at least part of the short-run price pressure.

JEL classification: G14; G32

Keywords: Convertible bond calls; Hedging; Short selling; Price pressure; Underwriting

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1. Introduction

The announcement of an 'in-the-money' convertible bond call is associated with an average contemporaneous abnormal stock price decline of 1.75% and an ensuing price recovery in the conversion period. This paper argues and provides evidence that the decline in stock prices is due to investors' short selling of the underlying stock at or around the call announcement. Two types of investors have incentives to hedge their equity exposure by short selling at the time of the call. First, the convertible hedge desks of investment banks try to lock in arbitrage profits by buying the called convertible bond and short selling the underlying stock. Short selling is used to hedge the equity risk of the convertible bond because the option to convert is not exercised immediately. Second, a possible underwriter of the call also short sells in order to hedge the equity risk associated with the call. The short selling of stock by these two types of investors, at least in part, causes the short-run price pressure.

In order to provide evidence for such hedging, this paper contains the first analysis of short selling around calls of convertible securities. More precisely, this paper examines the relationship between short selling, trade volume, the predictability of the call, the stock price reaction to the call announcement as well as variables related to hedging.

This paper shows that the short selling of stock increases in anticipation of the call and that, during the conversion period, the number of shares sold short is more than three times higher than after the call. On average, the total short selling involves at least 19% of the new shares to be issued upon conversion, which corresponds to nearly 14 days of trading based on the average trade volume before the call. In addition, the paper provides evidence of a large increase in the trade volume at the announcement of the call, and shows that this trade volume is related to the number of new shares to be issued upon conversion of the bonds. Such an increase in trade volume, at least partly due to short selling, is likely to depress stock prices, thus causing the short-run price pressure around convertible bond calls. Finally, the paper shows that the relationship between the announcement effect and several variables describing the call is consistent with a hedging-induced price pressure.

The case of convertible bond calls and the related findings are important for at least three reasons. First, the arguments and findings presented in this paper close a gap in the existing explanations for the negative announcement effect of convertible bond calls first documented by Mikkelson (1981). Harris and Raviv (1985) provide a theoretical model showing that the call is a signal revealing bad news about a firm's prospects. However, the empirical evidence does not seem to support this bad-news explanation.[1] Instead, Mazzeo and Moore (1992) document a recovery of stock prices during the conversion period and argue that the announcement effect is due to price pressure caused by investors wanting to sell the new shares received upon

[1] See for example Byrd and Moore (1996), Ederington et al. (1997), and Ederington and Goh (2001). Datta et al. (2003) find positive short-run but negative long-run abnormal returns and thus provide some evidence for the bad-news explanation.