Fixing the equilibrium problem: Contingent convertible bonds with floating coupon payments

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Abstract

Contingent convertible bonds (CoCos) are an increasingly popular financial instrument used by banks to satisfy their capital requirements. CoCos with market based conversion triggers in particular receive much attention in the scientific literature. As they are usually designed, these contracts may lead to problems for the correct pricing of the different assets issued by the same firms. This results in a not unique arbitrage-free price for the CoCos. In this paper we study how to set floating CoCo coupons to mark movements of the total asset value and in this way maintain a unique no-arbitrage price before conversion. These properties are studied for different dynamic models of the assets of the firm, such as the (Black-Scholes) Merton and stochastic volatility jump diffusion model. In particular, we illustrate how the CoCo coupons vary as functions of jump intensities and volatilities.