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# Stochastic volatility vs. Jump diffusions: Evidence from the Chinese convertible bond market

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**Abstract**

In this paper, we compare three convertible pricing models, including the constant volatility model, the stochastic volatility model and the jump-diffusion model, by using Chinese convertible bond data from 2002 to 2013. In particular, we conduct both in-sample and out-of-sample tests to evaluate these models. We find that the stochastic volatility model performs better than the other two in terms of in-sample fitting, with relative errors 91% (85%) smaller than those for the constant volatility (jump-diffusion) model. Moreover, the out-of-sample forecasts also support evidence on stochastic volatility for some bonds, with error reduction as large as 46%.

**Keywords:** Convertible bond pricing; Chinese market; Stochastic volatility; Jump diffusions; Monte Carlo simulation

**JEL Classification:** G10; G13; G17

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