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Convertible Preferred Stock Valuation: Tests of Alternative Models

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Abstract

We undertake a comprehensive test of several contingent claim valuation models adapted to callable, convertible preferred stocks employing a sample of 24 issues and over 27,000 daily price observations. To our knowledge, no large-scale tests of these models have been published. The most complete model tested is an extension of the 1970s developments of Ingersoll and of Brennan and Schwartz, allowing for realistic contract features including delayed callability and nonconstant call prices. The mean and the mean absolute pricing errors are approximately −0.18 percent and 5.4 percent, respectively, and this model fits the data substantially better than the simpler alternatives that ignore such features. Thus, the added computational complexity required for the most complete model examined is evidently merited. Moreover, to the extent that the most complete model accurately mirrors reality, the evidence suggests that investors rationally account for many of the complex features imbedded in typical contracts.

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