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A Reduced-Form Model for Valuing Bonds with Make-Whole Call Provisions

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Abstract

We develop a reduced-form valuation model for bonds with make-whole call provisions. Informed by the structural differences between callable bonds with fixed call prices and callable bonds with make-whole call provisions, we specify our reduced-form model so that the call spread depends inversely on the default intensity. Using a sample of make-whole callable bonds, we estimate the parameters of our model using the extended Kalman filter and compare the performance of our model with the performance of a well-known reduced-form model for fixed-price callable bonds.

Key Words:

Callable bonds | make-whole call provision | reduced-form model

Notes

1 An analysis in this section is an extension of Nayar and Stock (2008)

2 To facilitate comparison of the two models, the notation in this section closely follows the notation in Jarrow et al. (2010).

3 The notation in this section closely follows the notation in Jarrow et al. (2010).

4 Even though we did not include results from restricting the α term to be positive, in our sample data, allowing α term to be negative results in a noticeable improvement in fit.