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Credit Risk Models and the Valuation of Credit Default Swap Contracts

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Abstract

This paper surveys some of the main credit risk models within structural models and reduced-form models. In particular, it focuses on the Merton model and its extensions under the structural models. It also concentrates on intensity based models such as Jarrow and Turnbull (1995), Jarrow, Lando and Turnbull (1997), and Duffie and Singleton (1998). Empirical results investigating the differences between market-quoted credit default swaps premium and model implied CDS premiums are presented. Finally, the Kettunen, Ksendzovsky, and Meissner (KKM) model (2003) is reviewed and implemented to compute credit default swap premium for a given set of data. From the existing research on credit risk models, reduced form models seems to be the preferred approach when pricing a firm's risky debt or related credit derivatives.

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